

Information on Disposal for Users of Waste Electrical & Electronic Equipment (private households)



This symbol on the products and/or accompanying documents means that used electrical and electronic products should not be mixed with general household waste. For proper treatment, recovery and recycling, please take these products to designated collection points, where they will be accepted on a free of charge basis. Alternatively, in some countries you may be able to return your products to your local retailer upon the purchase of an equivalent new product.

Disposing of this product correctly will help to save valuable resources and prevent any potential negative effects on human health and the environment which could otherwise arise from inappropriate waste handling. Please contact your local authority for further details of your nearest designated collection point. Penalties may be applicable for incorrect disposal of this waste, in accordance with national legislation.

For business users in the European Union

If you wish to discard electrical and electronic equipment, please contact your dealer or supplier for further information.

Information on Disposal in other Countries outside the European Union

This symbol is only valid in the European Union.

If you wish to discard this product, please contact your local authorities or dealer and ask for the correct method of disposal.

Sales and Support Information

Customer Care Centre

- For customers within the UK : 0844 844 3852
- For customers within the Republic of Ireland: 01 289 8333
- Visit our website for product information www.panasonic.co.uk
- E-mail: customer.care@panasonic.co.uk

Direct Sales at Panasonic UK

- Order accessory and consumable items for your product with ease and confidence by phoning our Customer Care Centre Monday – Thursday 9:00am – 5:30pm, Friday 9:30am – 5:30pm (Excluding public holidays).
- Or go on line through our Internet Accessory ordering application at www.panasonic.co.uk.
- Most major credit and debit cards accepted.
- All enquiries transactions and distribution facilities are provided directly by Panasonic UK Ltd.
- It couldn't be simpler!
- Also available through our Internet is direct shopping for a wide range of finished products, take a browse on our website for further details.

Interested in purchasing an extended guarantee?

Please call 0870 240 6284 or visit www.panasonic.co.uk/guarantee.

Licence

Trademark Credits

- DVB is a trademark of the DVB Digital Video Broadcasting Project (1991 to 1996).
- VGA is a trademark of International Business Machines Corporation.
- Macintosh is a registered trademark of Apple Computer, USA.
- S-VGA is a registered trademark of the Video Electronics Standard Association.
- Even if no special notation has been made of company or product trademarks, these trademarks have been fully respected.
- SDHC Logo is a trademark.
- HDMI, the HDMI Logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC.
- HDAVI Control™ is a trademark of Matsushita Electric Industrial Co., Ltd.

Customer's Record

The model number and serial number of this product may be found on its rear panel. You should note this serial number in the space provided below and retain this book, plus your purchase receipt, as a permanent record of your purchase to aid in identification in the event of theft or loss, and for Warranty Service purposes.

Model Number

Serial Number

Panasonic (U. K.) Ltd.

Willoughby Road, Bracknell, Berks RG12 8FP Web Site : <http://www.panasonic-europe.com>

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Printed in Czech Republic

Panasonic®

Operating Instructions Plasma Television

Model No. TH-42PZ70BA
TH-42PZ70B
TH-50PZ70B

VIERA



VIERA Link

Q-Link

DVB

OWNER I.D.

SD
HG

FULL
HD
1080p

HD
ready

HDMI
HIGH-DEFINITION MULTIMEDIA INTERFACE

U.K. Standard

English

Please read these instructions before operating your set and retain them for future reference. The images shown in this manual are for illustrative purposes only.

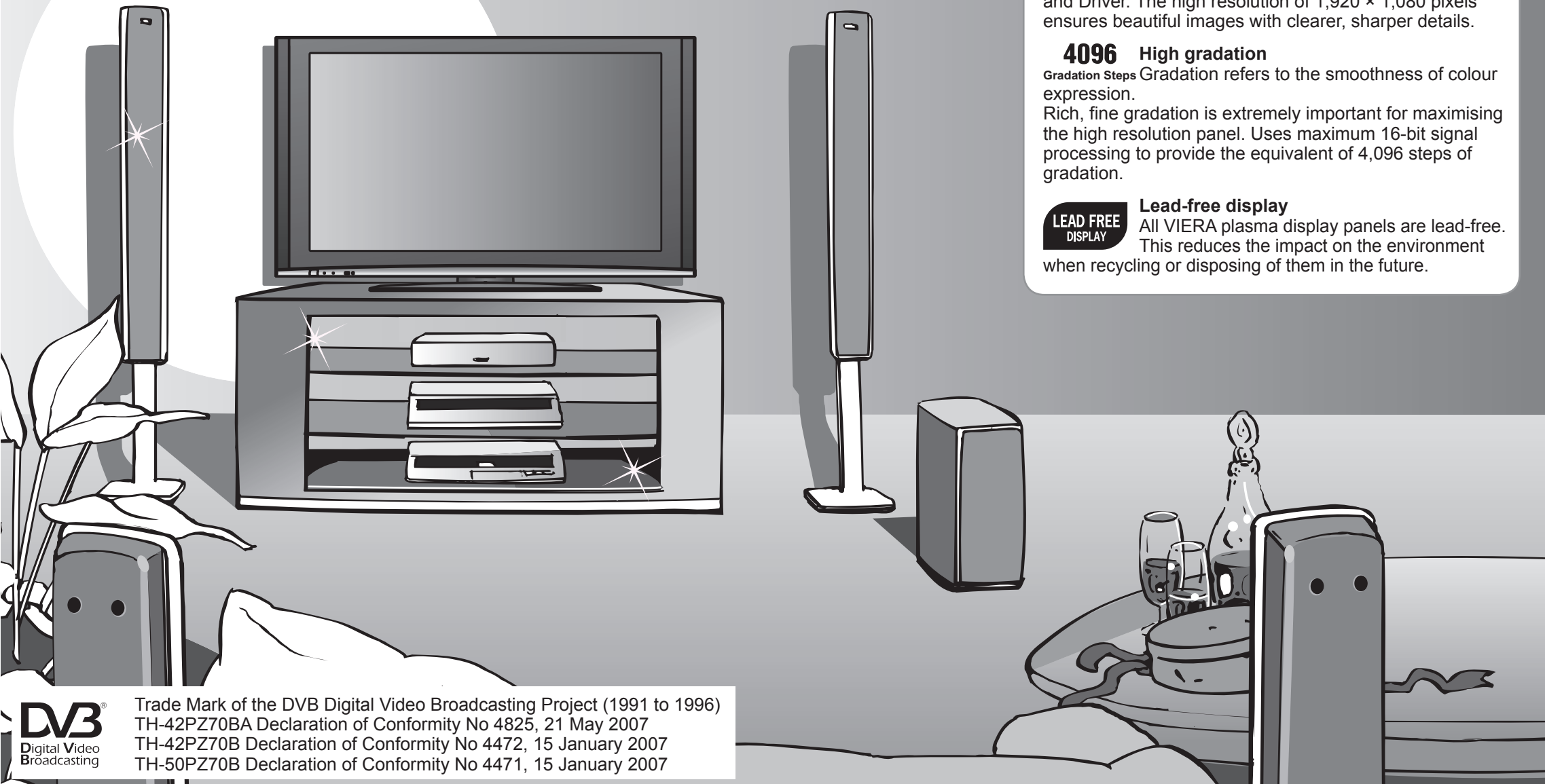


TQB0E0461

Turn your living room into a home theatre!

Experience an amazing level of multi-media excitement

- **Receive digital terrestrial broadcastings using an integrated (Digital Video Broadcasting) tuner**
(Display DVB programmes with TV Guide (p. 16) / Timer recording (p. 38) / Register and instantly call up favourite programmes with Profile Edit (p. 31))
- **Sharp pictures with HDMI terminal**
- **Control DVD recorder / VCR via TV with Q-Link connection** (p. 42)
- **Create home theatre and Panasonic equipment link-ups with "VIERA Link" without complicated settings!** (p. 44)
- **Support Audio Description signal** (p. 15 and p. 24)
Audio description (AD) is an ancillary component associated with a broadcast which delivers a verbal description of the visual scene as an aid to understanding and enjoyment particularly for visually-impaired viewers.



FULL HD 1080p

This TV uses a high definition plasma panel (1920 × 1080 pixels) to produce high definition pictures close to their original resolution.



V-real Pro 2

V-real Pro 2 technology is the collective name for original technologies developed by Panasonic to enhance total Full HD (1080p) image quality: **V-real Pro 2 PROCESSOR:** Enhance and output the incoming video signals as high-image-quality signals. The resulting video signals deliver the kind of high resolution that large screens require.

V-real Pro 2 DRIVER: Precisely controls panel drive to optimise its performance. Achieves high image quality with the equivalent of high steps of gradation.

V-real Pro 2 PANEL: Provide clear, vivid display of the video signal after processing by the V-real Pro 2 Processor and Driver. The high resolution of 1,920 × 1,080 pixels ensures beautiful images with clearer, sharper details.

4096 High gradation

Gradation Steps Gradation refers to the smoothness of colour expression. Rich, fine gradation is extremely important for maximising the high resolution panel. Uses maximum 16-bit signal processing to provide the equivalent of 4,096 steps of gradation.



Lead-free display

All VIERA plasma display panels are lead-free. This reduces the impact on the environment when recycling or disposing of them in the future.

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Enjoy your TV!

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Safety Precautions

Warning & Caution

Handling the mains plug

- Ensure that the mains plug is easily accessible at all times. The On / Off switch on this model does not fully disconnect the TV from the mains supply. Remove the mains plug from the wall socket when the TV is not used for a prolonged period of time.
- Ensure the grounding pin on the mains plug is securely connected to prevent electrical shock.
 - An apparatus with CLASS I construction shall be connected to a mains socket outlet with a protective earthing connection.
- Do not use any mains lead other than that provided with this TV. (This may cause fire or electrical shock.)

Power source

- This TV is designed to operate on 220-240 V, 50 / 60 Hz AC.

Do not remove the cover

- Do not remove the rear cover as live parts are accessible when it is removed. There are no user serviceable parts inside.

Do not expose to direct sunlight and other sources of heat

- Avoid exposing the TV to direct sunlight and other sources of heat. To prevent fire never place any type of candle or naked flame on top or near the TV.

Transport only in upright position

- Transporting the TV with its display panel facing upright or downward may cause damage to the internal circuitry.

IMPORTANT: THE MOULDED MAINS PLUG

FOR YOUR SAFETY, PLEASE READ THE FOLLOWING TEXT CAREFULLY.

This appliance is supplied with a moulded three pin mains plug for your safety and convenience. A 5 amp (TH-42PZ70BA, TH-42PZ70B) / 10 amp (TH-50PZ70B) fuse is fitted in this mains plug. Shall the fuse need to be replaced, please ensure that the replacement fuse has a rating of 5 amps (TH-42PZ70BA, TH-42PZ70B) / 10 amps (TH-50PZ70B) and that it is approved by ASTA or BSI to BS1362.

Check for the ASTA mark  or the BSI mark  on the body of the fuse.

If the mains plug contains a removable fuse cover, you must ensure that it is refitted when the fuse is replaced.

If you lose the fuse cover the mains plug must not be used until a replacement cover is obtained.

A replacement fuse cover may be purchased from your local Panasonic Dealer.

If the fitted moulded mains plug is unsuitable for the socket outlet in your home, then the fuse shall be removed and the mains plug cut off and disposed of safely. There is a danger of severe electrical shock if the cut off mains plug is inserted into any 13 amp socket.


If a new mains plug is to be fitted, please observe the wiring code as shown below.

If in any doubt, please consult a qualified electrician.

WARNING: – THIS APPARATUS MUST BE EARTHED.

IMPORTANT: – The wires in this mains lead are coloured in accordance with the following code: –
Green-and-Yellow: Earth Blue: Neutral Brown: Live

As the colours of the wire in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your mains plug, proceed as follows.

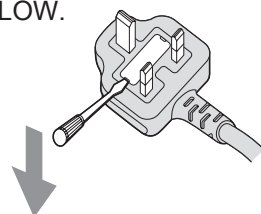
The wire which is coloured GREEN-AND-YELLOW must be connected to the terminal in the mains plug which is marked with the letter E or by the Earth symbol  or coloured GREEN or GREEN-AND-YELLOW.

The wire which is coloured BLUE must be connected to the terminal in the mains plug which is marked with the letter N or coloured BLACK.

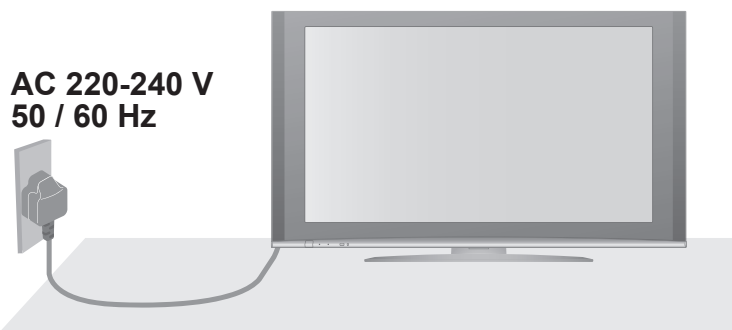
The wire which is coloured BROWN must be connected to the terminal in the mains plug which is marked with the letter L or coloured RED.

How to replace the fuse.

Open the fuse compartment with a screwdriver and replace the fuse.



AC 220-240 V
50 / 60 Hz



Do not expose to rain or excessive moisture

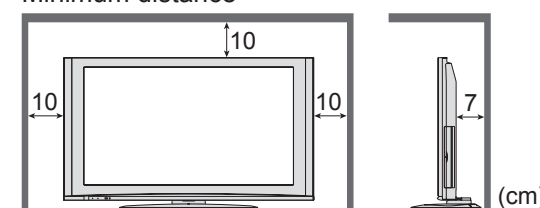
- To prevent damage which might result in electric shock or fire, do not expose this TV to rain or excessive moisture. This TV must not be exposed to dripping or splashing water and objects filled with liquid, such as vases, must not be placed on top of or above the TV.

Do not block the rear ventilation openings

- Ventilation should not be impeded by covering the ventilation openings with items such as newspapers, tablecloths and curtains.

Allow sufficient space around the TV for radiated heat

Minimum distance



Do not place the TV on sloped or unstable surfaces

- The TV may fall off or tip over.

Use only the dedicated stands / mounting equipment

- Using an unauthorized stand or other fixtures may make the TV shaky, risking injury. Be sure to ask your local Panasonic dealer to perform setup.
- Use optional stands / mounts (p. 6).

Do not allow children to handle SD card

- As with a small object, SD card can be swallowed by young children. Please remove SD card immediately after use.

Notes

Do not display a still picture for a long time

This causes the image to remain on the plasma screen ("image retention"). This is not considered a malfunction and is not covered by the warranty.

Typical still images

- Channel number and other logos
- Image displayed in 4:3 mode
- Video game
- Computer image



To prevent image retention, contrast is lowered automatically after a few minutes if no signals are sent or no operations are performed. (p. 51)

Auto power standby function

- If no signal is received and no operation is performed in Analogue TV mode for 30 minutes, the TV will automatically go to standby mode.

Keep the TV away from these equipment

- Electronic equipment
In particular, do not place video equipment near the TV (electromagnetic interference may distort images / sound).
- Equipment with an infrared sensor
This TV also emits infrared rays (this may affect operation of other equipment).

Maintenance

First, remove the mains plug from the socket outlet.

Display panel

Regular care: Gently wipe the surface clean of dirt by using a soft cloth.
Major contamination: Wipe the surface clean using a soft cloth dampened with clean water or diluted neutral detergent by 100 times of water. Then, using a soft dry cloth, evenly wipe the surface clean until it is dry.

Caution

- The surface of the display panel has been specially treated and may be easily damaged. Do not tap or scratch the surface with your fingernail or other hard object.
- Use care not to subject the surface to insect repellent, solvent, thinner, or other volatile substances (this may degrade surface quality).

Cabinet

Regular care: Wipe the surface clean using a soft dry cloth.
Major contamination: Dampen a soft cloth with clean water or water containing a small amount of neutral detergent. Then, wring the cloth and wipe the surface clean with it. Finally, wipe the surface clean with a dry cloth.

Caution

- Use care not to subject the TV's surfaces to detergent. (A liquid inside the TV could lead to product failure.)
- Use care not to subject surfaces to insect repellent, solvent, thinner, or other volatile substances (this may deteriorate the surface by peeling the paint).
- Do not allow the cabinet to make contact with a rubber or PVC substance for a long time.

Mains plug

Wipe the mains plug with a dry cloth at regular intervals. (Moisture and dust may lead to fire or electrical shock.)

Accessories / Options

Standard accessories

Check that you have the accessories and items shown ☒

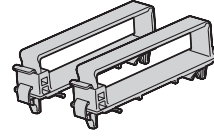
- ☐ Remote Control Transmitter
- N2QAYB000181



- ☐ Batteries for the Remote Control Transmitter (2)
- R6 (UM3)



- ☐ Clamper (2)
- TMME258



- ☐ Mains Lead
- K2CT3DH00018 (TH-42PZ70BA, TH-42PZ70B)
- K2CT3DH00025 (TH-50PZ70B)



- ☐ Operating Instructions
- ☐ Pan European Guarantee Card
- ☐ 1 Year Guarantee Registration
- ☐ CRM (Customer Relationship Management)

- ☐ Pedestal (ST-42D2-WG / ST-50D2-WG)
- TBL0E0009 (TH-42PZ70BA, TH-42PZ70B)
- TBL0E0008 (TH-50PZ70B)
- For installation → p. 7 and p. 8



Installing remote's batteries

- 1 Pull open
- Hook
- 2 Close
- Note the correct polarity (+ or -)

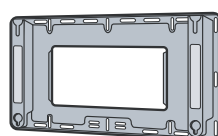
Caution

- Incorrect installation may cause battery leakage and corrosion, resulting in damage to the remote control.
- Do not mix old and new batteries.
- Do not mix different battery types (such as alkaline and manganese batteries).
- Do not use rechargeable (Ni-Cd) batteries.
- Do not burn or breakup batteries.

Optional accessories

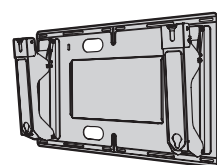
Wall-hanging bracket (vertical)

- TY-WK42PV3W



(angle)

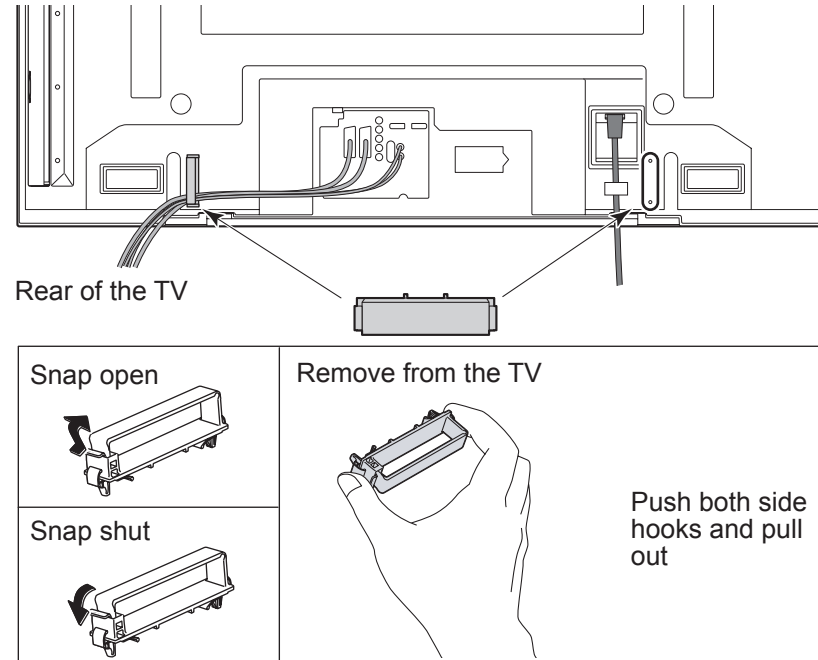
- TY-WK42PR2W
- TY-WK42PR3W



Caution

- In order to maintain the unit's performance and safety, be absolutely sure to ask your dealer or a licenced contractor to secure the wall-hanging brackets.
- Carefully read the instructions accompanying the plasma TV stand or pedestal, and be absolutely sure to take steps to prevent the TV from tipping over.
- Handle the TV carefully during installation since subjecting it to impact or other forces may cause product damage.

Using the clamper



- Do not bundle the RF cable and mains lead together (could cause distorted image).
- Fix cables with clampers as necessary.
- When using the optional accessory, follow the option's assembly manual to fix cables.
- How to fix cables when using the pedestal (standard accessory) → "Attaching the bands for fixing cables" (p. 8)

Installation of the pedestal

Warning

Do not disassemble or modify the pedestal.

- Otherwise the TV may fall over and become damaged, and personal injury may result.

Caution

Do not use any other TV and displays.

- Otherwise the TV may fall over and become damaged, and personal injury may result.

Do not use the pedestal if it becomes warped or physically damaged.

- If you use the pedestal while it is physically damaged, personal injury may result. Contact your nearest Panasonic dealer immediately.

During set-up, make sure that all screws are securely tightened.

- If sufficient care is not taken to ensure screws are properly tightened during assembly, the pedestal will not be strong enough to support the TV, and it might fall over and become damaged, and personal injury may result.

Use the accessory fall-prevention brackets to secure the TV.

- If the TV is knocked or children climb onto the pedestal with the TV installed, the TV may fall over and personal injury may result.

Two or more people are required to install and remove the TV.

- If two or more people are not present, the TV may be dropped, and personal injury may result.

Note

- Maintenance

Wipe the surfaces with a soft, dry cloth. If the pedestal is particularly dirty, clean it using a cloth soaked with water to which a small amount of neutral detergent has been added, and then wipe with a dry cloth.

Do not use products such as solvents, thinner or household wax for cleaning, as they can damage the surface coating. (If using a chemically-treated cloth, follow the instructions supplied with the cloth.)

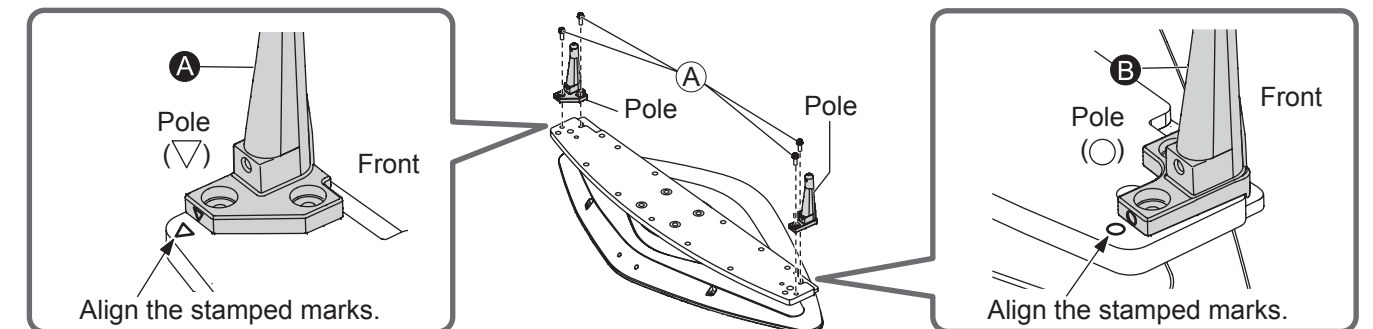
- Do not attach sticky tape or labels, as they can make the surface of the pedestal dirty. Do not allow long-term contact with rubber, vinyl products or the like. (Doing so will cause deterioration.)

Attaching the pedestal

- Ⓐ Assembly screw (4) M5 × 16
- Ⓑ Assembly screw (4) M5 × 30
- Ⓒ Pole (2)
- Ⓓ Base
- Ⓔ Band (2)

Assembling the pedestal

Use the four assembly screws Ⓐ to fasten the left and right poles to the base securely.

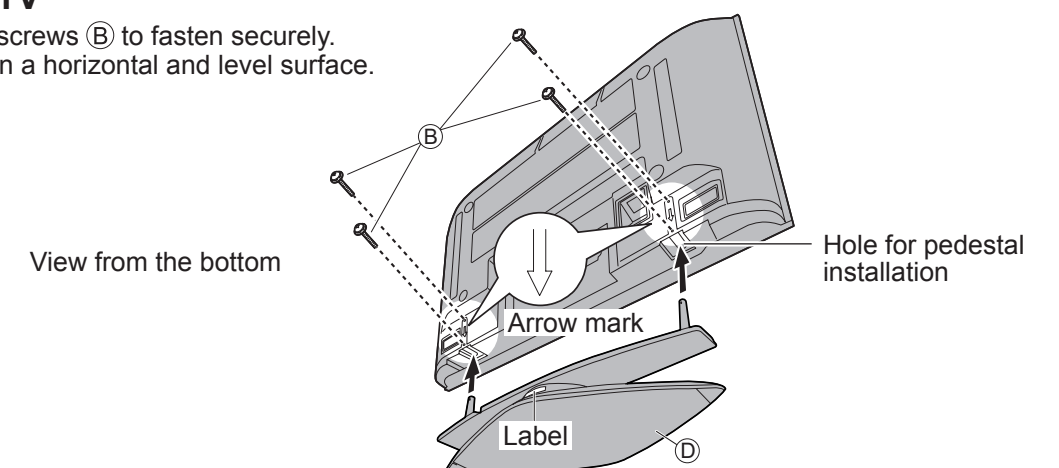


- Forcing the assembly screws the wrong way will strip the threads.

Securing the TV

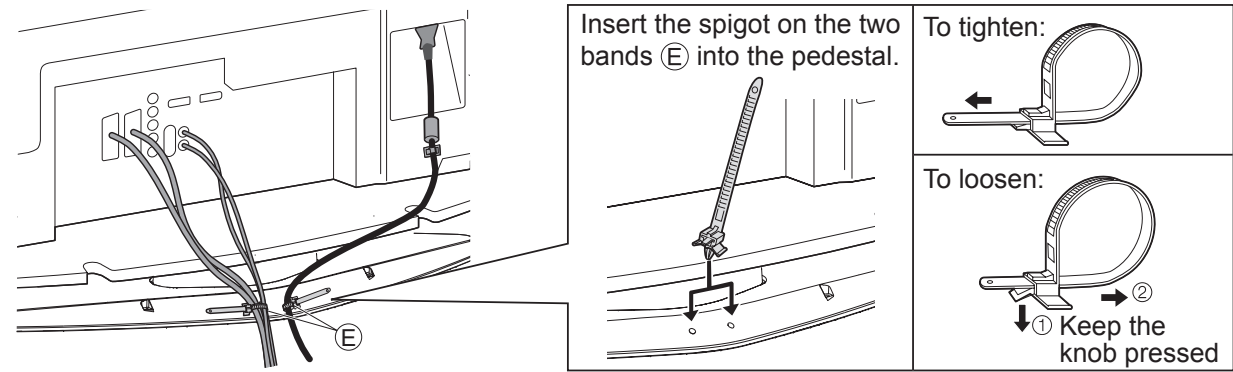
Use the assembly screws Ⓑ to fasten securely.

- Carry out work on a horizontal and level surface.



Installation of the pedestal

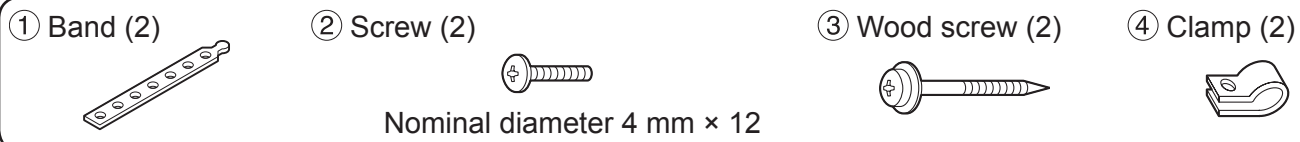
■Attaching the bands for fixing cables



Preventing the TV from falling over

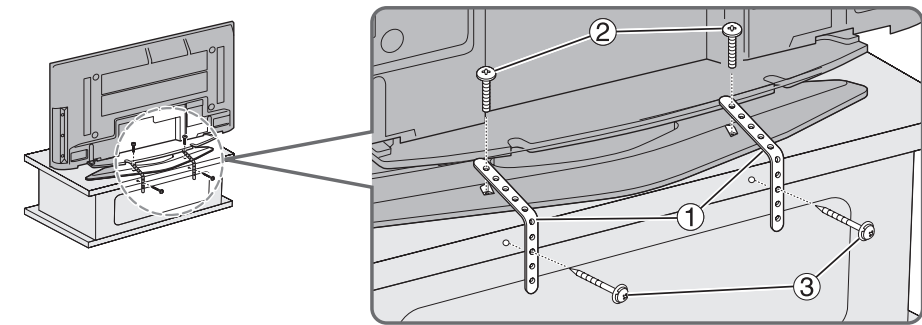
The TV could fall over during an earthquake, etc.
We recommend that measures are taken to prevent the TV from falling over in such an event.

- The information in this section is designed to reduce the risk of injuries caused by the TV falling over during an earthquake, etc.
However, no measure can guarantee protection against all earthquakes.
- The precautions in this section are recommendations for providing more secure installation of your TV if you live in an earthquake prone area.



■Securing to a base

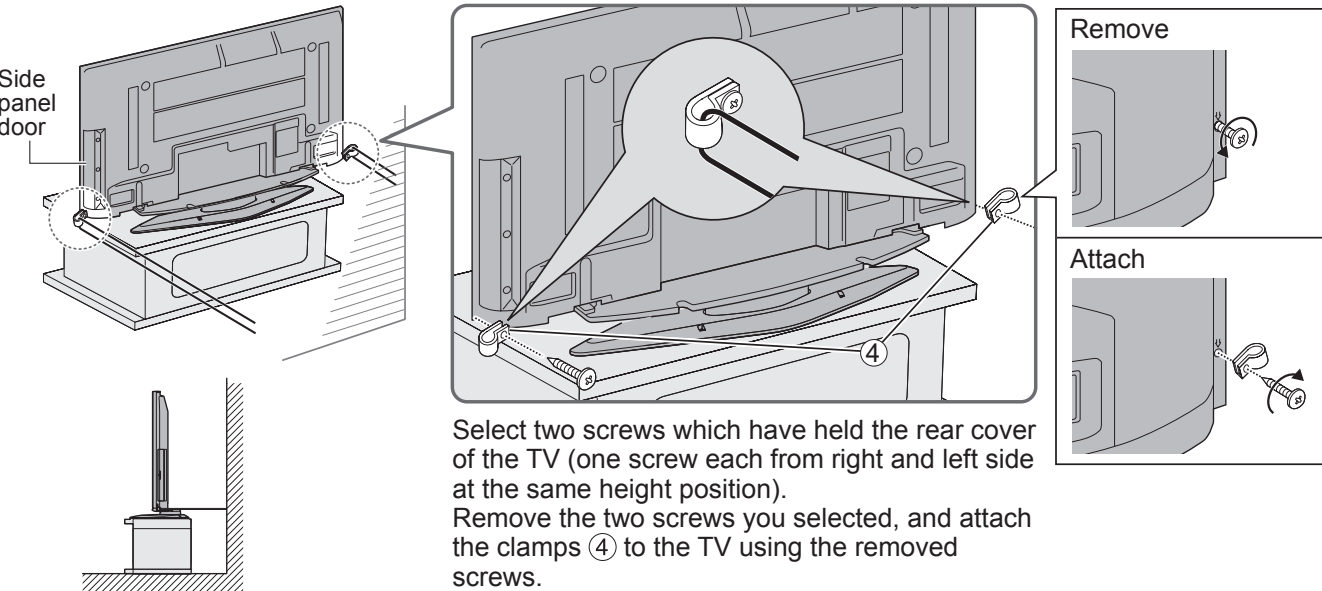
Fix pedestal and base together with band.



■Securing to a wall

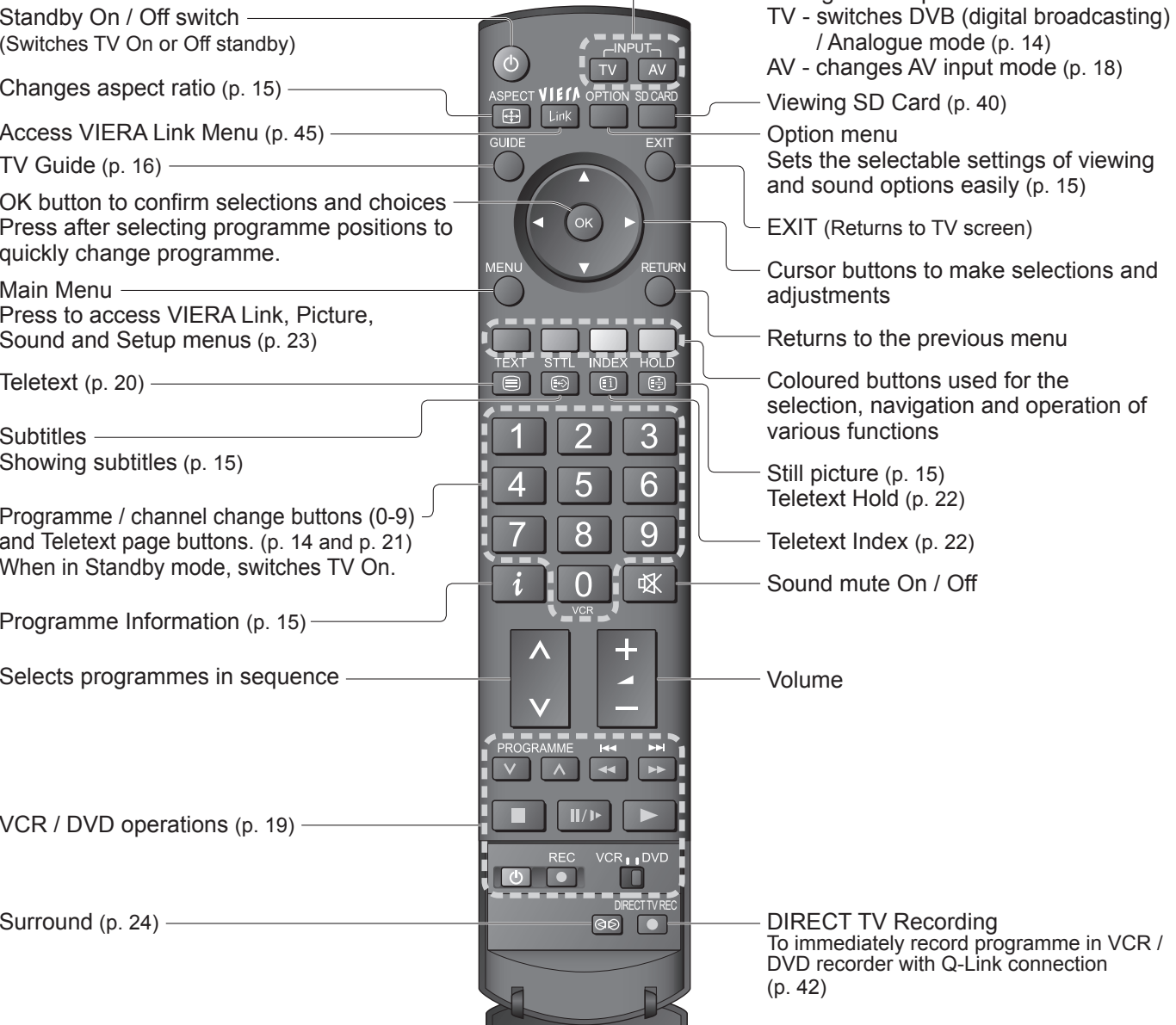
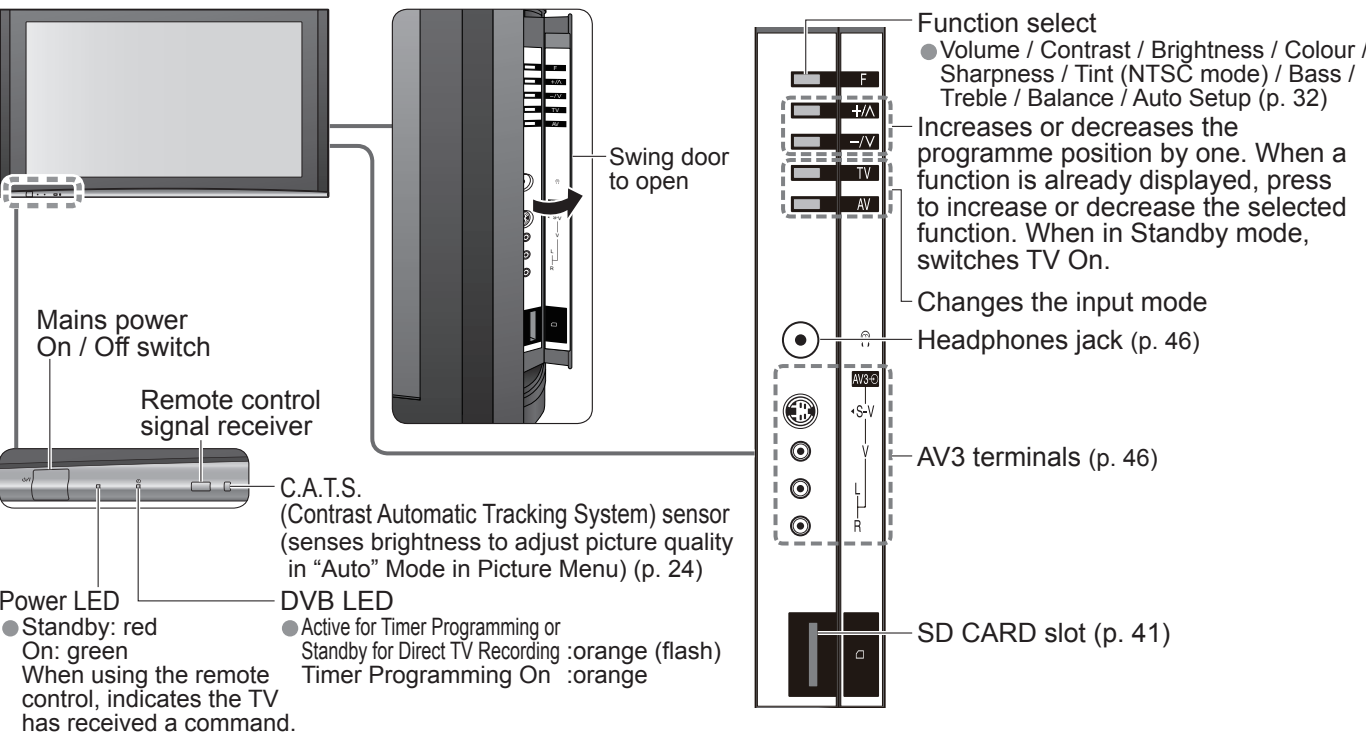
Fix to wall or post with strong commercial wire or chain.

- Before fixing, make sure that it does not obstruct the side panel door and the use of the buttons / terminals inside.



Select two screws which have held the rear cover of the TV (one screw each from right and left side at the same height position). Remove the two screws you selected, and attach the clamps ④ to the TV using the removed screws.

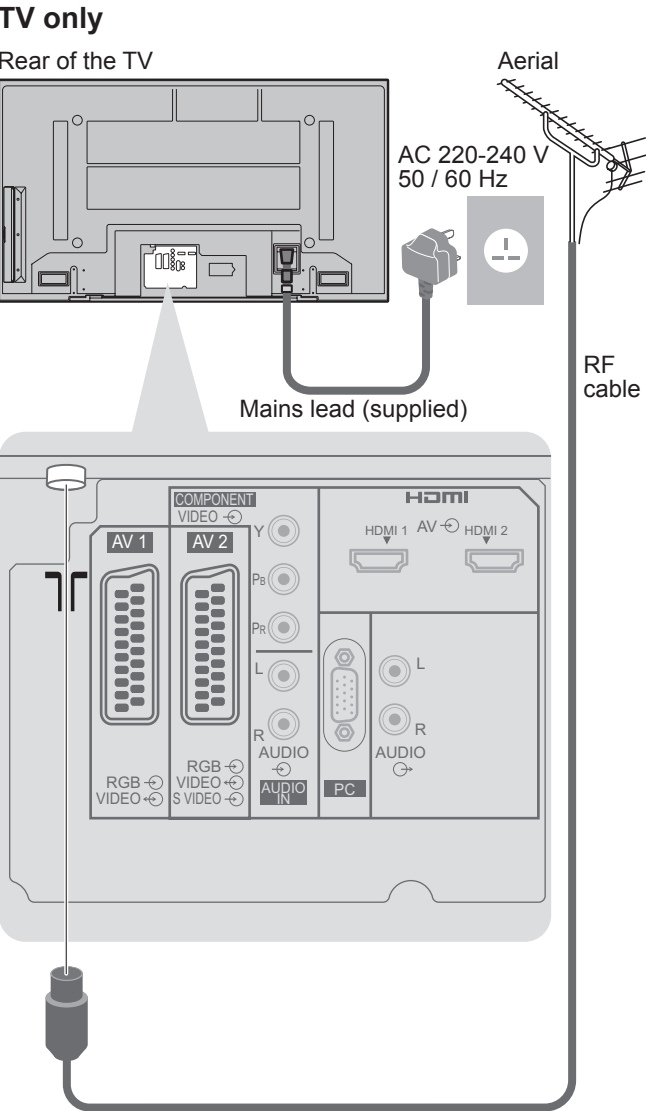
Identifying Controls



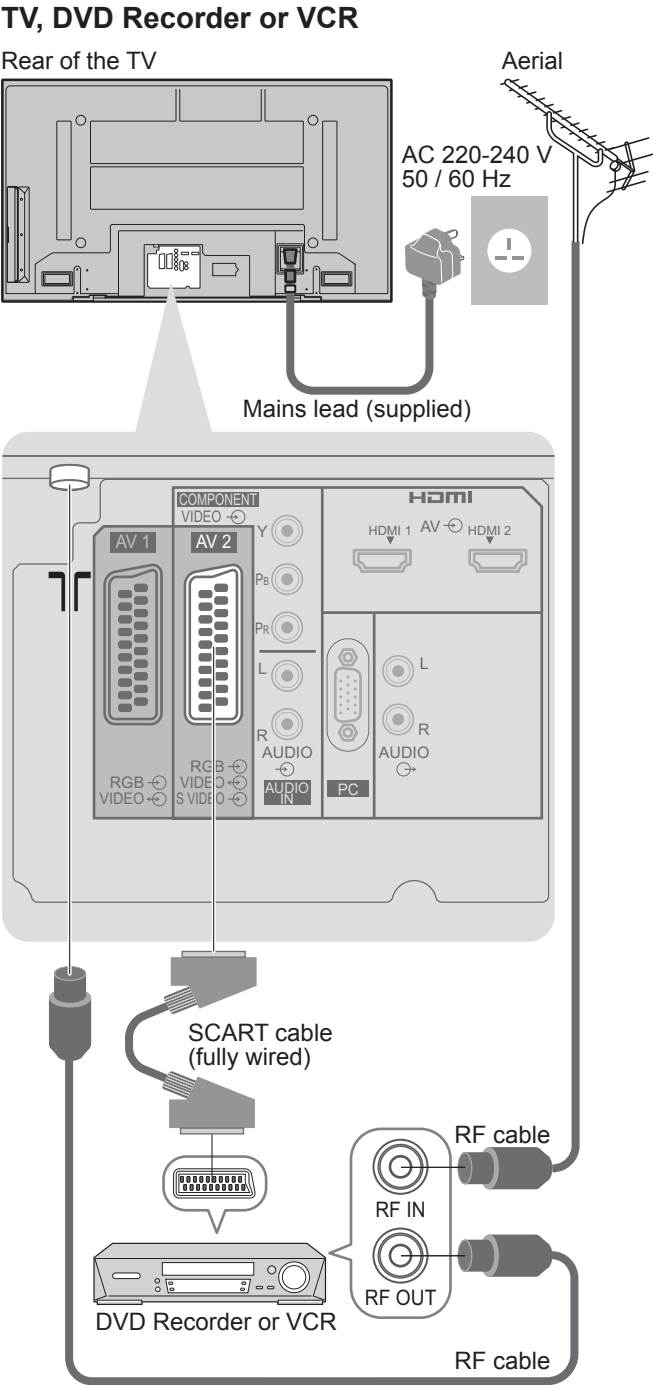
Basic Connection

External equipment and cables shown are not supplied with this TV.
Please ensure that the unit is disconnected from the mains socket before attaching or disconnecting any leads.
When disconnecting the mains lead, be absolutely sure to disconnect the mains plug at the socket outlet first.

Example 1 Connecting aerial

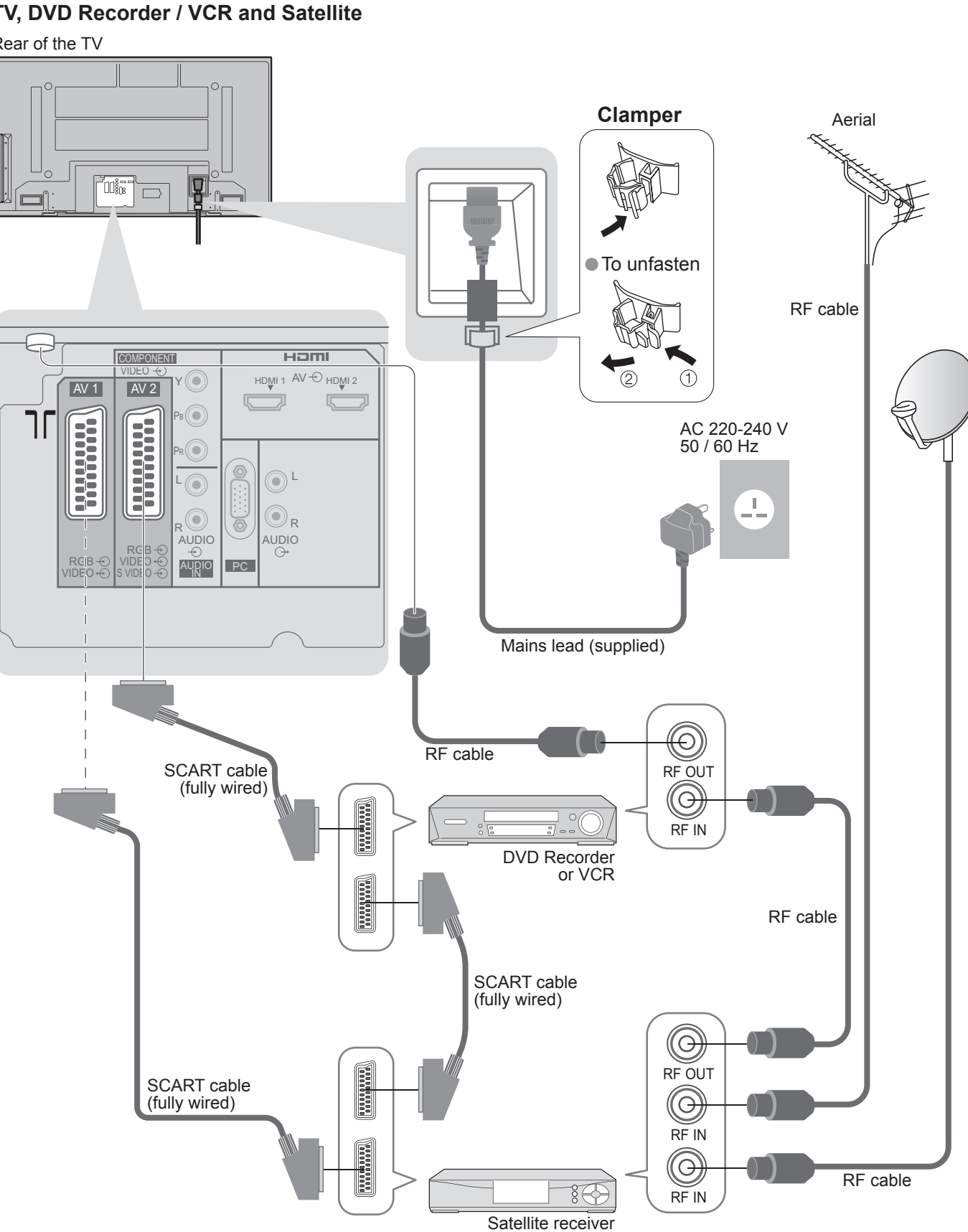


Example 2 Connecting DVD Recorder / VCR



- Note**
- Connect to AV2 for a DVD Recorder / VCR supporting Q-Link (p. 42).
 - Connect to AV1 for a Satellite receiver.
 - If connecting the TV and Satellite receiver with SCART cable, you can watch satellite broadcast by RGB input signal.
- SCART: 21 pin connection used for video, audio and switching signals (Also known as Euro SCART and Peritel)
 - RF: Radio Frequency - Signal received from terrestrial aerial.
 - RGB / S-Video / Video: Choose between these three video formats depending on personal preference and equipment requirement. (RGB - Red, Green and Blue)
 - VCR: Video Cassette Recorder
 - DVD: Digital Versatile Disc

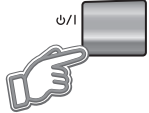
Example 3 Connecting DVD Recorder / VCR and Sattelite receiver

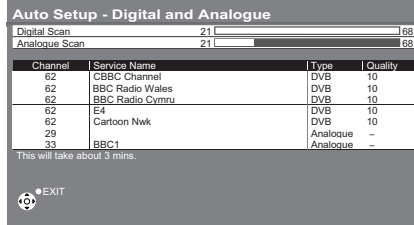


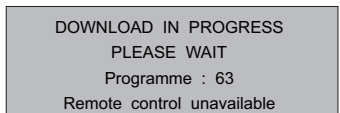
Auto Setup

Search and store TV channels automatically.
These steps are not necessary if the setup has been completed by your local dealer.

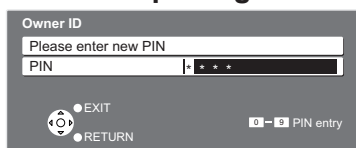
1 Plug the TV into mains socket and switch On
(Takes a few seconds to be displayed)

 You can now use the remote control to turn On the TV or turn the TV to standby mode. (Power LED: On)

 Auto Setup will start to search for TV channels and store them in the numbered order as specified by the broadcasters.

 If a compatible recording equipment with Q-Link or similar technologies (p. 42) is connected, analogue channel information is automatically downloaded to the equipment.

2 When inputting owner ID

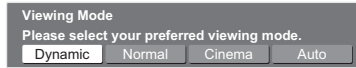
 Following the on-screen operation guide, enter your own choice of PIN number, name, etc.

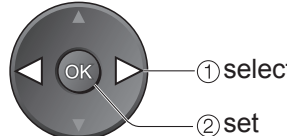
- For detailed procedures → "Owner ID" (p. 35)
- Make a note of the PIN number in case you forget it.

When inputting owner ID later


- If you input the ID later → "Owner ID" (p. 35)

3 Select the picture setting

 Also possible to change the setting in Picture Menu (p. 24)

 ① select ② set

Auto Setup is now complete and your TV is ready for viewing.





- To check programme list at-a-glance → TV Guide (p. 16)
- To edit channels → Editing Channels (p. 30) Analogue Programme Edit (p. 33)

Using the On Screen Displays

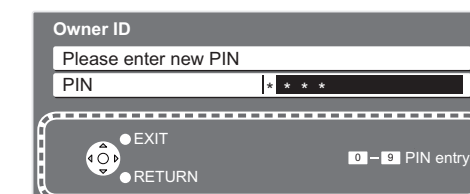
Many features available on this TV can be accessed via the On Screen Display menu.

How to use remote control

- MENU** Open the main menu
-  Move the cursor / select the menu
-  Move the cursor / adjust levels / select from a range of options
- OK** Access the menu / store settings after adjustments have been made or options have been set
- RETURN** Return to the previous menu
- EXIT** Exit the menu system and return to the normal viewing screen

ON SCREEN HELP Instructions box

(example: Owner ID)



On-screen operation guide will help you.

Note

- If tuning has failed → "Auto Setup" (p. 32).
- If downloading has failed → "Download" (p. 25).
- If you turned the TV Off during Standby mode last time, the TV will be in Standby mode when you turn the TV On with Mains power On / Off switch.

Watching TV

1 Turn power on
(Press for about 1 second)
● Mains power On / Off switch should be On.

2 Select DVB (Digital Video Broadcasting) or Analogue
● You can also select the mode using the TV button on the side panel of the TV.

3 Select a channel
● To select the two or three-digit programme number, e.g. 39
→ 3 → 9 (in a short time)
● To select programmes using TV Guide (p. 16)

Information banner

Volume

Note

- To watch pay-TV (p. 29)

Other useful functions (Operate after 3)

Off Timer

Turn the TV off automatically after a fixed period

Display the menu → **Select "Setup"** → **Select "Off Timer" and set the time**


● To cancel → Set to "Off" or turn the TV off
● To display the remaining time → Information banner (p. 15)
● When the remaining time is within 3 minutes, the remaining time will flash on screen.

Other useful functions (Operate after 3)

Hold	Freeze / unfreeze picture	HOLD
Display subtitles	Display / hide subtitles (if available) ● To change the language for DVB → "Preferred Subtitles" (p. 25) (If available)	STTL
Display the current programme status	Check or change the current programme status instantly ● To change → ② change ① select Subtitle Language (DVB mode) → Possible if the programme has some languages of subtitles Multi Audio (DVB mode) → Possible if the programme has some languages of sounds NICAM (Analogue mode) → Sound Menu (p. 24) Volume Correction → Adjusts volume of individual channel or input mode Audio Description (DVB mode) → This function can aid visually-impaired viewers by adding an additional audio track to describe events on-screen. Select "On" if the programme has this signal, then you will hear the description sound Note ● Also possible to change the settings in Menu list (p. 24 and p. 25).	OPTION
Display information banner	Display programme information ● Information of another channel → ● Information on next programme (DVB) → ● To watch the programme listed in the banner → OK ● Information banner operation → i 1st press → Display banner 2nd press → Banner + programme synopsis (DVB) 3rd press → Exit ● "AD", "Subtitles", "TXT", "Multi-Audio" indications are displayed as available on particular channels or services, but may not be available for all individual programmes being broadcast. Press the i button twice to confirm availability of these functions.	<p>To change the category → blue</p> <p>Features available</p> <p>Off timer</p> <p>Multiple audio</p> <p>Teletext</p> <p>Audio description</p> <p>Scrambled broadcasting</p> <p>Sound mute</p> <p>Status</p> <p>Analogue: Programme</p> <p>DVB: Programme</p> <p>Start / Finish time</p> <p>Change category</p> <p>For info press i</p> <p>Now</p> <p>23:35</p> <p>20:00 - 20:55</p> <p>Coronation Street</p> <p>1 BBC ONE WALES</p>
Change aspect ratio	Change the aspect ratio (p. 48) Enjoy viewing the picture at its optimum size and aspect. ● To change the mode → Display Aspect Selection list → During the list is displayed, select the mode → Store OK ● To change the mode using the ASPECT button only → ASPECT (Press repeatedly until you reach the desired mode)	<p>Aspect Selection list</p> <p>ASPECT</p>

Using TV Guide

TV Guide—Electronic Programme Guide (EPG) provides an on-screen listing of programmes currently broadcast and future broadcasts over the next seven days (depending on the broadcaster). Analogue broadcasts will be listed after DVB broadcasts. “D” means DVB channel and “A” means Analogue channel.



View TV Guide (landscape or portrait)
View “Portrait” to see one channel at a time
View “Landscape” to see many channels

Programme Current date and time (TV Guide start page)

TV Guide date
TV Guide time
Channel

Landscape (Displays by broadcaster)

■ To change the layout
GUIDE
(Landscape / Portrait)

■ To previous day (DVB mode)
red

■ To next day (DVB mode)
green

■ To view a programme list of the selected type (DVB mode)
yellow

■ To view a programme list of the selected category
blue

■ To return to TV
EXIT

TV Guide : Landscape
Wed 12th
Wed 12/05/04 10:46
Prog. type All Types
Category All Services

Time	19:30	20:00	20:30	21:00	21:30
D 1 BBC ONE	Eastender	DIY SOS	The Bill	Red Cap	
D 7 BBC THR	Hot Wars	Coronation Street	Horiday Program	So	
D 14 E4	Emmerdal.				
D 70 CBBC Cha	10 O' clock News BBC	Pepsi Char.	Good bye	Hello	
D 72 Cartoon	Panorama	Sex And The City	Terminator		
D 105 BBCi	I'm A Celebrity	Pop Idol	News	The	
D 719 BBC Radi	Rugby	15 To 1	The Bill		

Select channel
Change display mode
Timer Programming
-24 Hr +24 Hr
Prog. type Category

TV Guide Portrait
Wed 12th
Wed 12/05/04 10:46
Prog. type All Types
Category All Services

Time	19:30 - 20:00	20:00 - 21:00	21:00 - 22:00	22:00 - 23:00	23:00 - 00:00
D 1 BBC O	Eastender	DIY SOS	The Bill	Red Cap	Live junction
D 7 BBC T					POP 100
D 14 E4					Rugby

Select programme
Change display mode
Timer Programming
-24 Hr +24 Hr
Prog. type Category

(Type list)

Prog. type	All Types
All Types	
Movies	
News	
Entertainment	
Sport	
Children's	
Education	
Lifestyle	
Drama	

(Category list)

Category	All Services
All Services	
All DVB Services	
All Analogue Services	
Free TV	
Pay TV	
Radio	
Information	
Profile 1	
Profile 2	
Profile 3	
Profile 4	

Only analogue TV channels are listed

To list favourite channels (p. 31)

Other useful functions (Operate after viewing TV Guide)

Watch the programme

Select the channel or programme now on the air
Select “View” (DVB)
(TV screen)

View details of the programme (DVB mode)

Select the programme
View details
To return to the start page

Select the programme to be broadcast
(Timer Programming screen)
DVB LED will turn on if Timer Programming is set.
DVB LED
Orange DVB LED (Rapid blinking during recording)
To return to TV Guide

Timer programming to record (DVB mode)

■ To check / change / cancel a timer programming event
“Timer Programming” (p. 38)

Note

- When recording programmes, you must make the proper settings on the external recording equipment connected to the TV. If a compatible recording equipment with Q-Link or similar technologies is connected to the TV (p. 10) and the “Q-Link Settings” (p. 25) are completed, no setting of the equipment is required. Also read the manual of the recording equipment.
- If you select the programme now on the air, the confirmation screen whether watching or recording will appear. Select “Timer Programming” to record from the time you finish the Timer Programming setting.

Note

- When this TV is turned on for the first time, or the TV is switched off for more than a week, it may take some time before the TV Guide is completely shown.

Watching VCR, DVD and Satellites

Connect the external equipment (VCRs, DVD equipment, etc.) and you can watch the input.
Connect the Satellite receiver and you can watch satellite broadcasts.
To connect the equipment (p. 10 and p. 11)
The Remote Control is capable of operating some functions of selected Panasonic external equipment.



■ To return to TV
→ TV

1 Turn the TV on

- When connecting with SCART as example 2 or 3 (p. 10 and p. 11)
 - ➔ Receives input signals automatically when playback starts or satellite receiver is switched on
 - Input signals are automatically identified by the SCART (pin 8) terminal.
 - This function is also available for HDMI connections (p. 45).

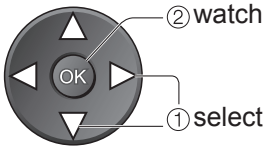
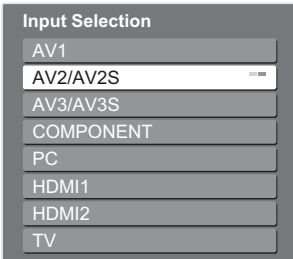
■ If input mode is not switched automatically

- ➔ Perform 2 and 3
- Dependant on the setup of the equipment

2 Display the Input select menu



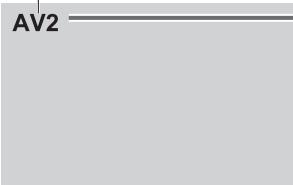
3 Select the input mode connected to the equipment



- You can also select the input using the AV button on the remote control or the side panel of the TV.
Press the button repeatedly until the desired input is selected.
- You can label or skip each input modes ➔ "Input Labels" (p. 36)

4 View

Displays the selected mode



Note

- If the external equipment has an aspect adjustment function, set to "16:9".
- For details, see the manual of the equipment or ask your local dealer.

Screen display

Terminal	AV1	AV2	AV3	Component	PC	HDMI1	HDMI2
Manual input (default setting in "Input Labels")	AV1 AV1-RGB	AV2 AV2-S-Video AV2-RGB	AV3 AV3-S-Video	Component	PC	HDMI1	HDMI2
Auto input (EC mode or VIERA Link)	EC/AV1 EC/AV1-RGB	EC/AV2 EC/AV2-S-Video EC/AV2-RGB	—	—	—	EC/HDMI1 ● Applicable for EC mode and VIERA Link	EC/HDMI2 ● Applicable for VIERA Link

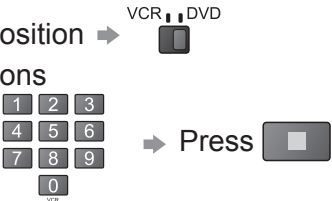
Panasonic equipment connected to the TV can be directly operated with the remote control.

VCR / DVD	VCR / DVD switch* Select VCR to operate Panasonic VCR or DVD equipment Select DVD to operate Panasonic DVD equipment or Player home theatre
Standby	Set to Standby mode / Turn on
Play	Playback videocassette / DVD
Stop	Stop the operations
Rewind / Skip / Search	VCR: Rewind, view the picture rapidly in reverse DVD: Skip to the previous track or title Press and hold to search backward
Fast-forward / Skip / Search	VCR: Fast-forward, view the picture rapidly forward DVD: Skip to the next track or title Press and hold to search forward
Pause	Pause / Restart DVD: Press and hold to play at slow speed
Programme Up / Down	Select programme
Record	Start recording

*Setting your remote control to operate Panasonic VCR, DVD, etc.

- ① Set the VCR / DVD switch to the appropriate position ➔
- ② Press and hold during the following operations

Enter the appropriate code for the equipment to be controlled, see table below



"VCR" position

Equipment	Code
VCR	10 (default)
DVD	11

"DVD" position

Equipment	Code
DVD	70 (default)
Player home theatre	71

Note

- Confirm correct operation after the code changed.
- The codes will be reset to default values if batteries are replaced.
- "DVD" means DVD player, DVD recorders and Recorder home theatre.
- Some operations may not be possible on some equipment models.

Viewing Teletext

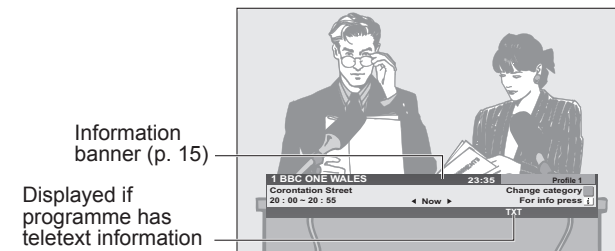
You can enjoy news, weather forecasts and subtitles, etc. (depending on the broadcaster)

DVB (digital broadcasting) mode

DVB teletext services

DVB teletext services differ greatly from analogue teletext. When you switch to a DVB teletext service, the images you see can contain graphics and text, laid out and controlled in a manner decided by the broadcaster.

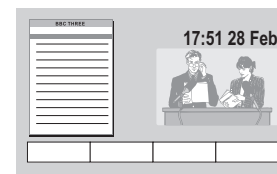
- You can check if the programme has teletext information.



1 If in Analogue mode
Select DVB



2 **Switch to Teletext**



How to use

In all cases, it is possible to navigate the pages using buttons on the remote control, but because the commands available must apply to all manufacturers of DVB equipment, some on screen commands may not correspond exactly to the remote control buttons. For example:

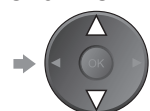
- When "select" or "go" is displayed →
- When "◀", "▶", "▲", "▼" symbol is displayed →
- When the key words are displayed on colour bar →
- When options with numbers are displayed →
- When "i" is displayed → (information)

■ **To return to TV** →

Note

- As soon as you switch to a DVB channel with links to a teletext service, software is downloaded in the background to enable the teletext function. This means that when switching to a DVB channel, you should wait for approximately 5 seconds before pressing the TEXT button - this will allow the software to download. If you press the TEXT button before download is complete, there will be a short delay before the text screen is displayed.
- While navigating DVB teletext, you will find there is a short delay when moving between pages while the page downloads. There is often a prompt shown somewhere on the page (for example "Loading") to let you know that this is happening.

■ **To change the channel**



Analogue mode

What is FASTEXT mode (default)?

In FASTEXT mode, four differently coloured subjects are situated at the bottom of the screen. To access more information about one of these subjects, press the appropriately coloured button. This facility enables fast access to information on the subjects shown.

What is List mode?

In List mode, four differently coloured page numbers are situated at the bottom of the screen. Each of these numbers can be altered and stored in the TV's memory. ("Store frequently viewed pages", p. 22)

■ **To change mode** → "Teletext" in Setup Menu (p. 25)



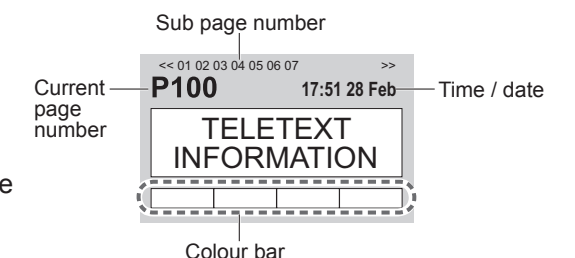
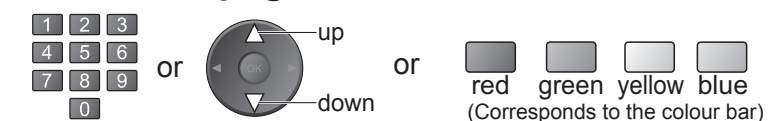
1 If in DVB mode
Select Analogue



2 **Switch to Teletext**



3 **Select the page**



■ **To adjust contrast** → →

■ **To return to TV** → (Press twice)
● Press once to have picture and text. Press again to return to TV.

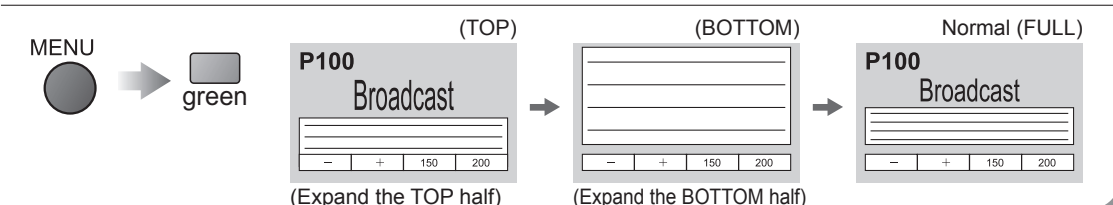
■ Using Analogue teletext

Reveal hidden data

Reveal hidden words e.g. quiz page answers









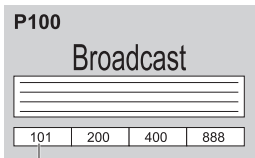




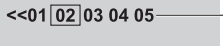










FULL / TOP / BOTTOM




Viewing Teletext


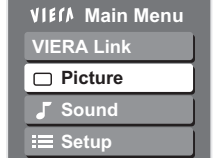

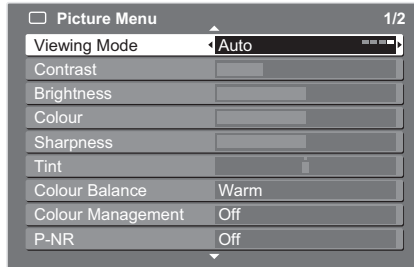

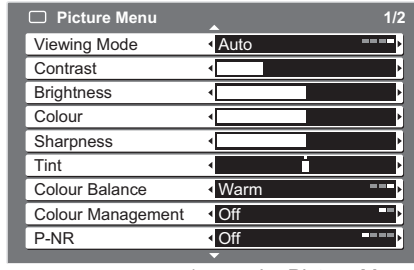

■ Using Analogue teletext (Continued)


HOLD	If you wish to hold the current page without updating Stop automatic updating  ■ To resume → 
INDEX	Return to the main index page 
Subtitles	View subtitles by pressing STTL button  ● Factory setting is "P888" (subtitle service) on blue button (List mode).
View in multi window	Watch TV and Teletext in two windows at once  ● Operations can be made only in Teletext screen. ● Each time pressed: Teletext → TV and Teletext 
Store frequently viewed pages	Store frequently viewed pages in the colour bar (List mode only) As page is displayed  Corresponding colour button →  press and hold  ● If you wish to use Subtitles, do not change number on blue button. ■ To change stored pages Enter new page number  Colour button you want to change →  →  press and hold The number changes to white.
View sub page	View sub page (Only when teletext is more than one page)   Appears at top of the screen ■ To view specific sub page →  →  → Enter the 4-digit number example: P6  →  ● Sub pages: The number of sub pages varies depending on the broadcasters (up to 79 pages). It may take some time for searching, during which time you can watch TV.
Watch TV while waiting for update	View the TV picture while searching for a teletext page Teletext automatically updates itself when new information becomes available. Changes to TV screen temporarily  →  →  Appears when updating is completed →  → View the updated page (You cannot change the channel.) ● The news page provides a function that indicates arrival of latest news ("News Flash").


How to Use Menu Functions


Various menus allow you to make settings for the picture, sound, and other functions.




- 1 Display the menu**
● Displays the functions that can be set (varies according to the input signal)

- 2 Select the menu**

(example: Picture Menu)

② access
① select
- 3 Select the item**

(example: Picture Menu)

select
- 4 Adjust or select**

(example: Picture Menu)

① change
② store or access (Required by some functions)

■ Choose from among alternatives

Number and positions of alternatives
Changed

■ Adjust using the slide bar

Moved

■ Go to the next screen

Displays the next screen

■ To change menu pages

up
down

Note
● To initialize all settings
→ "Shipping Condition" (p. 34)

How to Use Menu Functions

Menu list

Menu	Item	Adjustments / Configurations (alternatives)
VIERA Link	VIERA Link Control	Controls the connected Panasonic equipment “Access and control the connected equipment by VIERA remote control” (p. 45) “Speaker control” (p. 45)
	Speaker Selection	● You can also access VIERA Link Menu directly using the VIERA Link button on the remote control.
Picture	Viewing Mode	Selects four different screen settings (Dynamic / Normal / Cinema / Auto) In each Viewing Mode setting, Contrast, Brightness, Colour, Sharpness, Tint (in NTSC only), Colour balance, Colour Management and 3D-COMB can be adjusted and stored to suit your particular viewing requirement (e.g., you may require different settings for viewing sports, films, news etc.) Set for each input signal Changes will be stored automatically. By analysing and processing the incoming picture, all four modes feature automatic enhancement
	Contrast, Brightness, Colour, Sharpness	Increases or decreases the levels of these options according to your personal preference
	Tint	With an NTSC signal source connected to the TV, the picture hue can be adjusted to suit your taste
	Colour Balance	Allows you to set the overall colour tone of the picture (Cool / Normal / Warm)
	Colour Management	Automatically adjusts colours to vivid ones (Off / On) ● Not valid on PC signal
	P-NR	Picture Noise Reduction Automatically reduces unwanted picture noise and flicker noise in the contoured parts of a picture (Off / Min / Mid / Max) ● Not valid on PC signal
	3D-COMB	Occasionally, whilst viewing still or slow moving pictures, colour patterning may be seen Set to “On” to display sharper and more accurate colours (Off / On) ● For PAL or NTSC signal reception only ● Not valid on RGB, S-Video, components, PC, HDMI and SD Card ● Analogue mode only
	Reset to Default	Press the OK button to reset the present Picture Mode to the default settings ● P-NR is reset to Off (Analogue) or Min (DVB)
Sound	Mode	Select two different sound settings (Music / Speech) In each Sound Mode setting, Bass and Treble can be adjusted and stored to suit your particular sound requirement Changes to any settings in a mode will affect all signal sources Sound quality can be improved
	Bass	Increases or decreases level to enhance or minimise lower, deeper sound output
	Treble	Increases or decreases level to enhance or minimise sharper, higher sound output
	Balance	Adjusts volume level of right and left speakers
	Headphone Volume	Adjusts the volume of the headphones
	Surround	Surround sound settings (Off / On) Provides a dynamic enhancer to simulate improved spatial effects ● Switching is also possible by the Surround button on the remote control (p. 9)
	Volume Correction	Adjusts volume of individual channel or input mode
	Preferred Multi Audio	Selects the preferred language for DVB multi audio (depending on the broadcaster)
	NICAM	NICAM (Near Instantaneous Companded Audio Multiplex) A format for digital sound over television Reproduces stereo sound (Off / On) ● Off if reception is poor (FM monaural sound) ● Analogue mode only
	HDMI1 Input	Select to fit the input signal (Auto / Digital / Analogue) (p. 43) Auto : Automatic detection of digital or analogue sound source Digital : HDMI cable connection Analogue : HDMI-DVI adapter cable connection ● HDMI input mode only ● HDMI2 terminal is for digital signal only ● No setting for HDMI2 available
	Audio Description Menu	Audio Description
		Volume
		Speakers
		Headphones
	Reset to Default	Press the OK button to reset the present Sound Mode to the default settings ● Effective to Bass, Treble, Balance and Headphone Volume

Menu list

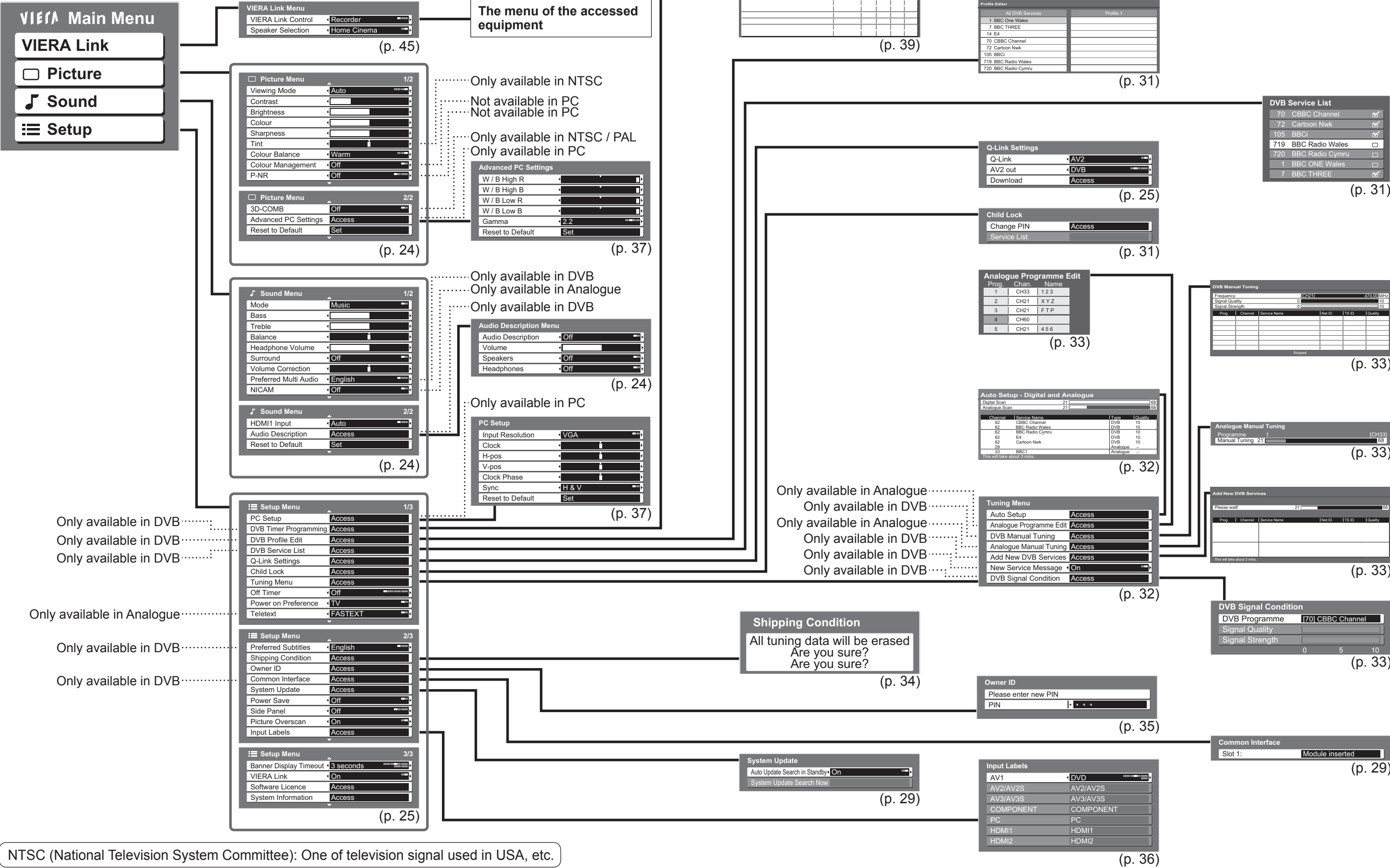
Menu	Item	Adjustments / Configurations (alternatives)
Setup	DVB Timer Programming	Records future programmes (p. 38)
	DVB Profile Edit	Creates list of favourite programmes (p. 31)
	DVB Service List	Skips the unwanted DVB channels (p. 31)
	Q-Link Settings	Q-Link
		AV1 / AV2 out
		Download
	Child Lock	Locks a programme channel to prevent access to it (p. 31)
	Tuning Menu	Auto Setup
		Analogue Programme Edit
		DVB Manual Tuning
		Analogue Manual Tuning
		Add New DVB Services
		New Service Message
		DVB Signal Condition
	Off Timer	Sets the time the TV automatically turns Off (Off / 15 / 30 / 45 / 60 / 75 / 90 minutes)
	Power on Preference	Set to “TV” to view picture from TV tuner. Set to “AV” to view input from an external equipment connected to a SCART terminal, e.g. satellite receiver (TV / AV) ● The external equipment must be switched on and sending a control signal for automatic switching at power on to occur
	Teletext	Analogue teletext display mode (FASTEXT / List) (p. 21)
	Preferred Subtitles	Selects the preferred language for DVB subtitles (depending on the broadcaster) ● To display subtitles ➡ p. 15
	Shipping Condition	Resets all settings, for example, when moving house (p. 34)
	Owner ID	Inputs the owner ID (p. 35)
	Common Interface	Uses include to watch pay-TV (p. 29)
	System Update	Downloads new software to TV (p. 29)
	Power Save	Reduces brightness of picture to economise on power consumption (Off / On)
	Side Panel	Increases the brightness of the side panel (Off / Low / Mid / High) ● The recommended setting is “High” to prevent panel “image retention”
	Picture Overscan	Selects the screen area displaying the image (Off / On) On : Enlarged the image to hide the edge of the image. Off : Displayed the image in the original size. ● Set to “On” if noise is generated on the edge of the screen. ● This function is available when aspect is set to Auto or 16:9. ● This function can be memorized for SD (Standard definition) and HD (High definition) signals separately.
	Input Labels	Labels or skips each input terminals (p. 36)
	Banner Display Timeout	Sets how long the information banner (p. 15) stays on screen ● 0 (No display) to 10 sec. in 1-sec. increments
	VIERA Link	Sets to use VIERA Link functions (Off / On) (p. 44)
	Software Licence	Displays the software licence information
	System Information	Displays the system information of this TV

- A different menu will be displayed while PC or SD Card is used. (p. 37 and p. 41)
- Only available items can be selected.

How to Use Menu Functions

Overview

● How to operate (p. 23)



NTSC (National Television System Committee): One of television signal used in USA, etc.

● How to Use Menu Functions
(picture, sound quality, etc.)

Advanced

DVB Settings (DVB mode)

DVB Settings provide access to various advanced features.

1

If in Analogue mode
Select DVB

2

Display the menu

3

Select "Setup"

VIERA Main Menu	
VIERA Link	
Picture	
Sound	
Setup	

4

Select "Common Interface" or "System Update"

Setup Menu 2/3	
Preferred Subtitles	English
Shipping Condition	
Owner ID	
Common Interface	Access
System Update	Access
Power Save	Off
Side Panel	Off
Picture Overscan	On
Input Labels	

5

Set

2 access

1 select

2 access

1 select

■ To return to TV

EXIT

Pay-TV Common Interface

The Common Interface Module menu provides access to software contained on Common Interface (CI) Modules.
This TV receiver works only Pay TV modules complying with CI standard.

Caution

- Turn Off Mains power On / Off switch whenever inserting or removing the CI module.
- If a view card and a card reader come as a set, first insert the card reader, then insert the view card into the card reader.
- Do not insert the module up side down.

1 Insert the CI module (optional)

- The features that appear on screen are dependent on the contents of the selected CI module.
- Normally pay-TV services will appear without 2 and 3.
- If pay-TV services does not appear, perform 2 and 3.
- For more details, see the manual of the CI module, or check with the broadcaster.

2 Access "Common Interface"

3 Follow the on-screen instructions

example: select, go → OK → ◀▶▶▶▶ →

Coloured characters → red green yellow blue

- On-screen operation guide may not correspond to the remote control buttons.

Update TV's software system System Update

Download new software to TV.
● For details (p. 49)

If System Update is performed, the software will be updated (it may change TV functions). If you do not wish to do so, set "Auto Update Search in Standby" to Off.

Select "Auto Update Search in Standby" and then set "On" or "Off"

- On: Automatically performs a search in standby and downloads an update, if any software updates are available

■ To update immediately

Select "System Update Search Now"

Searches for an update (for several min.) and displays a corresponding message if any

Download

- Download may take for about 20 min.

● DVB Settings (DVB)
(pay-TV, software update)


Advanced

28

29

Editing Channels

You can make your favourite channel lists, skip unwanted channels and control channel audience.



- 1 Select DVB or Analogue**
 ● “DVB Profile Edit” and “DVB Service List” are available in DVB mode only.
- 2 Display the menu**
 MENU
- 3 Select “Setup”**
 VIERA Main Menu
 VIERA Link
 Picture
 Sound
 Setup
- 4 Select “DVB Profile Edit”, “DVB Service List” or “Child Lock”**
 Setup Menu 1/3
 DVB Timer Programming
 DVB Profile Edit Access
 DVB Service List Access
 Q-Link Settings
 Child Lock Access
 Tuning Menu
 Off Timer Off
 Power on Preference TV
 Teletext FASTEXT
- 5 Set**
 ■ To return to TV
 EXIT

List favourite channels

DVB Profile Edit (DVB mode)

Create your favourite channel list (Profile) from various broadcasters (up to 4: Profile 1 to 4). The list is added to “Category” in TV Guide (p. 16) and information banner (p. 15) and then easily accessed.

① Select a channel and add it to the list

All DVB Services	Profile 1
1 BBC One Wales	
7 BBC THREE	
14 E4	
70 CBBC Channel	
72 Cartoon Nwk	
105 BBCi	
719 BBC Radio Wales	
720 BBC Radio Cymru	

To change the category
 → red

To display another Profile
 → blue

To add all channels to the list
 → yellow

A channel is added

All DVB Services	Profile 1
1 BBC One Wales	1 BBC One Wales
7 BBC THREE	
14 E4	
70 CBBC Channel	
72 Cartoon Nwk	
105 BBCi	
719 BBC Radio Wales	
720 BBC Radio Cymru	

■ To edit Profile

Select the field of Profile to edit and:

- To name the Profile → red → Select the character → OK → RETURN
- To move the channel → green → Select the new position → Confirm → OK
- To delete the channel → yellow
- To delete all channels → blue

② Store

- Channel numbers (known as logical channel numbers) cannot be changed, due to broadcast restrictions.

Skip unwanted channels

DVB Service List (DVB mode)

You can hide unwanted services. The deleted services cannot be displayed except in this function. Use this function to skip unwanted services.

Select a service and add / delete

DVB Service List	
70 CBBC Channel	✓
72 Cartoon Nwk	✓
105 BBCi	✓
719 BBC Radio Wales	□
720 BBC Radio Cymru	□
1 BBC ONE Wales	□
7 BBC THREE	✓

② add / delete
 ① select

✓ : add
 □ : delete (skip)

Control channel audience

Child Lock

You can lock specific channels and control who watches them. (When a channel is selected, a message appears; by entering the PIN number, you can watch the channel.)

① Enter the PIN number (4 digits)

Child Lock-PIN Entry
 Please enter new PIN
 PIN

1 2 3
 4 5 6
 7 8 9
 0

- Enter the PIN number twice at first setting.
- Make a note of the PIN number in case you forget it.

② Select “Service List”

Child Lock
 Change PIN
 Service List Access

② access
 ① select

③ Select the channel to be locked

Service Name	Type	Lock
1 BBC One Wales	DVB	✓
7 BBC THREE	DVB	✓
14 E4	DVB	✓
70 CBBC Channel	DVB	✓
72 Cartoon Nwk	DVB	✓
105 BBCi	DVB	✓
719 BBC Radio Wales	DVB	□
720 BBC Radio Cymru	DVB	□

Appears when the channel is locked

② set
 ① select

- To cancel
 → Select the locked channel
 → OK
- To lock all channels → yellow
- To cancel all channel locks → blue

■ To change the PIN number

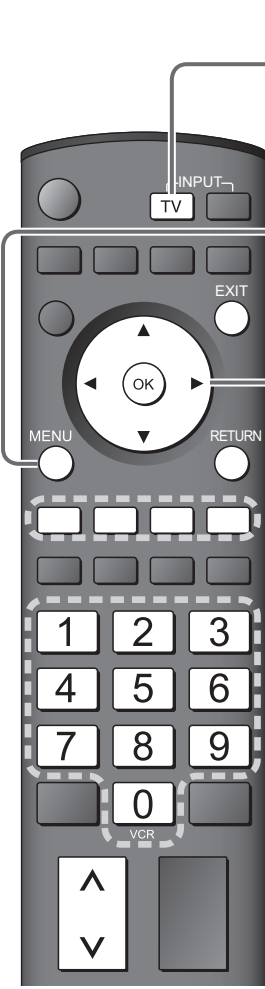
Select “Change PIN” in ② and enter a new PIN number twice.

Note

- Setting “Shipping Condition” (p. 34) erases the PIN number and all settings.

Tuning Channels

You can re-tune all TV channels when moving house or search for new services which may have recently started broadcasting.

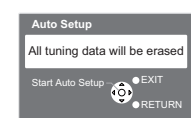


- Select DVB or Analogue**
 - “DVB Manual Tuning”, “Add New DVB Services”, “New Service Message” and “DVB Signal Condition” are available in DVB mode only.
 - “Analogue Programme Edit” and “Analogue Manual Tuning” are available in Analogue mode only.
- Display the menu**
- Select “Setup”**
- Select “Tuning Menu”**
- Select a function and set**

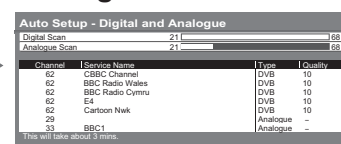
■ To return to TV → EXIT

Automatically set the DVB and Analogue channels received in the area. If a Child Lock PIN number (p. 31) has been set, it must be entered.

Start Auto Setup



Settings are made automatically



- All previous settings are erased.
- The analogue settings are downloaded to a Q-Link compatible equipment connected to the TV.

- When the operation is completed, the digital service at programme position “1” will be displayed. If no DVB services are found, the first analogue service will be displayed.
- If tuning has not done completely → “DVB Manual Tuning”, “Analogue Manual Tuning”

For Auto Setup, using the buttons on the side of the TV

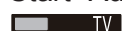
- 1 Press repeatedly until “Auto Setup” appears



- 2 Access “Auto Setup”



- 3 Start “Auto Setup”



■ To return to TV → F

Set DVB and Analogue channels automatically

Auto Setup

Edit Analogue channels

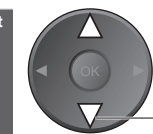
Analogue Programme Edit

- Delete
- Add
- Move
- Change name

Edit the analogue programme position settings

1 Select the channel to edit

Prog.	Chan.	Name
1	CH33	1 2 3
2	CH21	X Y Z
3	CH21	F T P
4	CH60	
5	CH21	4 5 6

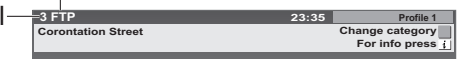


Cursor

select

Name

Channel



2 Edit

- To delete → red
- After confirming, press red
- To add → green
- After confirming, press green
- To move → yellow
- Select new position → yellow

■ To change the name of the broadcaster displayed when selecting channels

Prog.	Chan.	Name
1	CH33	1 2 3
2	CH21	X Y Z
3	CH21	F T P
4	CH60	
5	CH21	4 5 6

- Select the “Name” field
- Enter the “User input” mode
- Select the character
- Set (Maximum: five characters)
- Store

Set DVB channel manually

DVB Manual Tuning

Normally use “Auto Setup” or “Add New DVB Services” to add DVB channels to your service list. If tuning has not done completely, use this function.

Prog.	Channel	Service Name	Net ID	TS ID	Quality
1	CH33	1 2 3			
2	CH21	X Y Z			
3	CH21	F T P			
4	CH60				
5	CH21	4 5 6			

- 1 select channel
- 2 search

- All services found will be added to the DVB Service List (p. 31) automatically.

Set Analogue channel manually

Analogue Manual Tuning

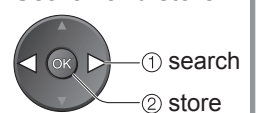
Set Analogue channel manually after Auto Setup. If a VCR is connected with only the RF cable, select programme position “0”.

Prog.	Channel	Service Name	Net ID	TS ID	Quality
1	CH33	1 2 3			
2	CH21	X Y Z			
3	CH21	F T P			
4	CH60				
5	CH21	4 5 6			

Select the programme position



Select the channel



Search and store

- 1 search
- 2 store

Add DVB channel automatically

Add New DVB Services

Any new services found will be added to the DVB Service List (p. 31) automatically.

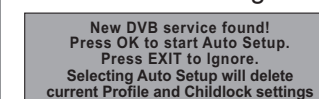
Prog.	Channel	Service Name	Net ID	TS ID	Quality
1	CH33	1 2 3			
2	CH21	X Y Z			
3	CH21	F T P			
4	CH60				
5	CH21	4 5 6			

- The new service is added with the current settings saved as they are.

Display a notification message

New Service Message

Selects whether to give a notification message when a new DVB service is found. (Off / On)



- Selecting OK (Auto Setup) will delete current Profile and Childlock settings.

Check DVB signal

DVB Signal Condition

Selects a channel and checks the DVB signal condition. Use for adjusting the direction of the aerial.

- To change the programme
- (during the menu appears)

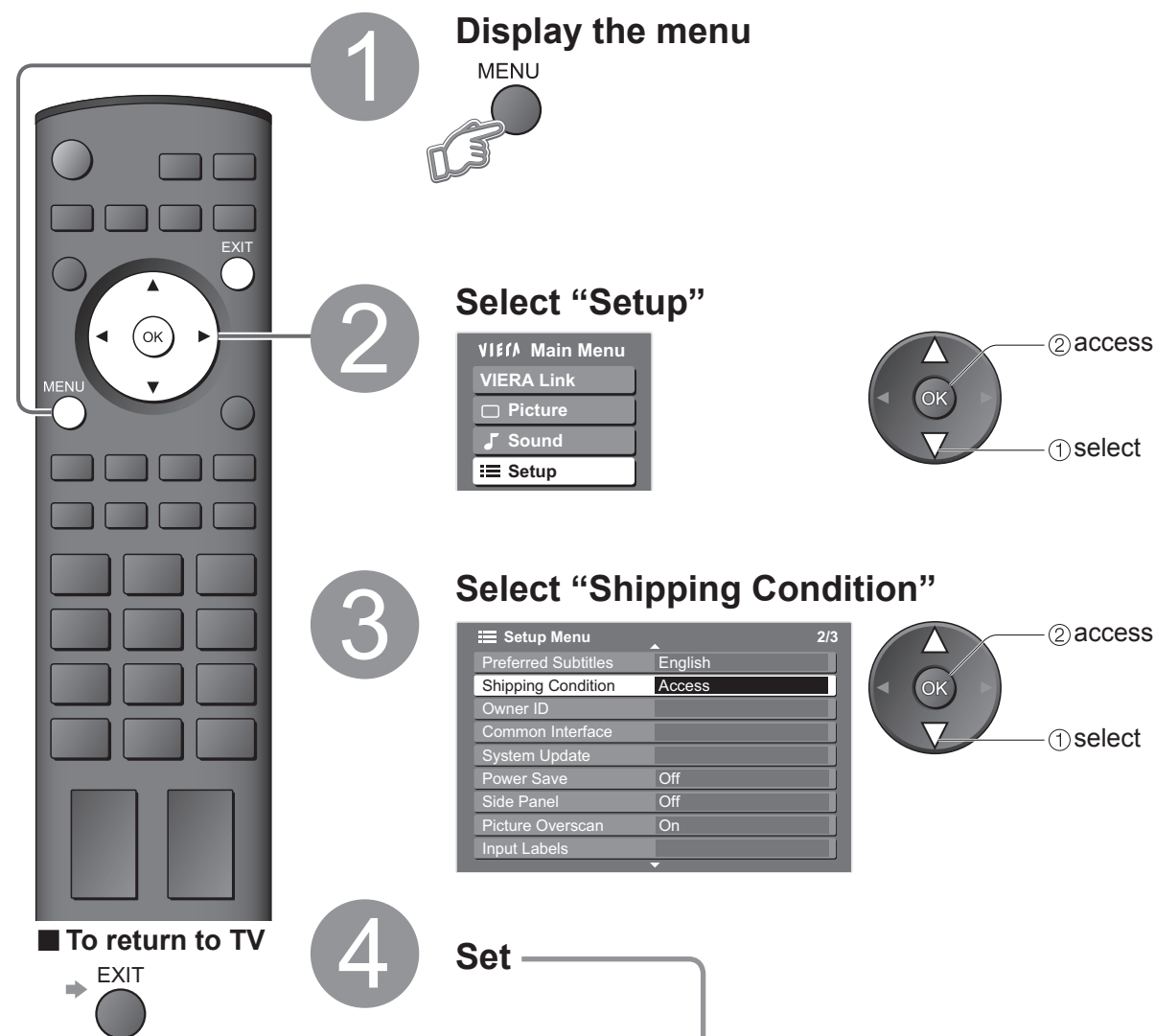
DVB Programme	Signal Quality	Signal Strength
170 CBBC Channel		

A good Signal Strength is not an indication of suitable signal for DVB reception. Please use the Signal Quality indicator as follows:

- Signal Quality:
- Green bar → Good
- Yellow bar → Poor
- Red bar → Bad (Check the aerial)

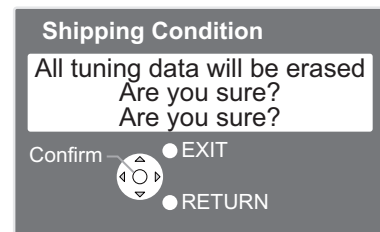
Restore Settings

Resets the TV to its original condition, i.e. no channels tuned in.
All settings other than "Owner ID" (channels, picture, sound quality, etc.) are reset.



Restore Settings
Shipping Condition

① Check the message and initialise



② Follow the on-screen instructions

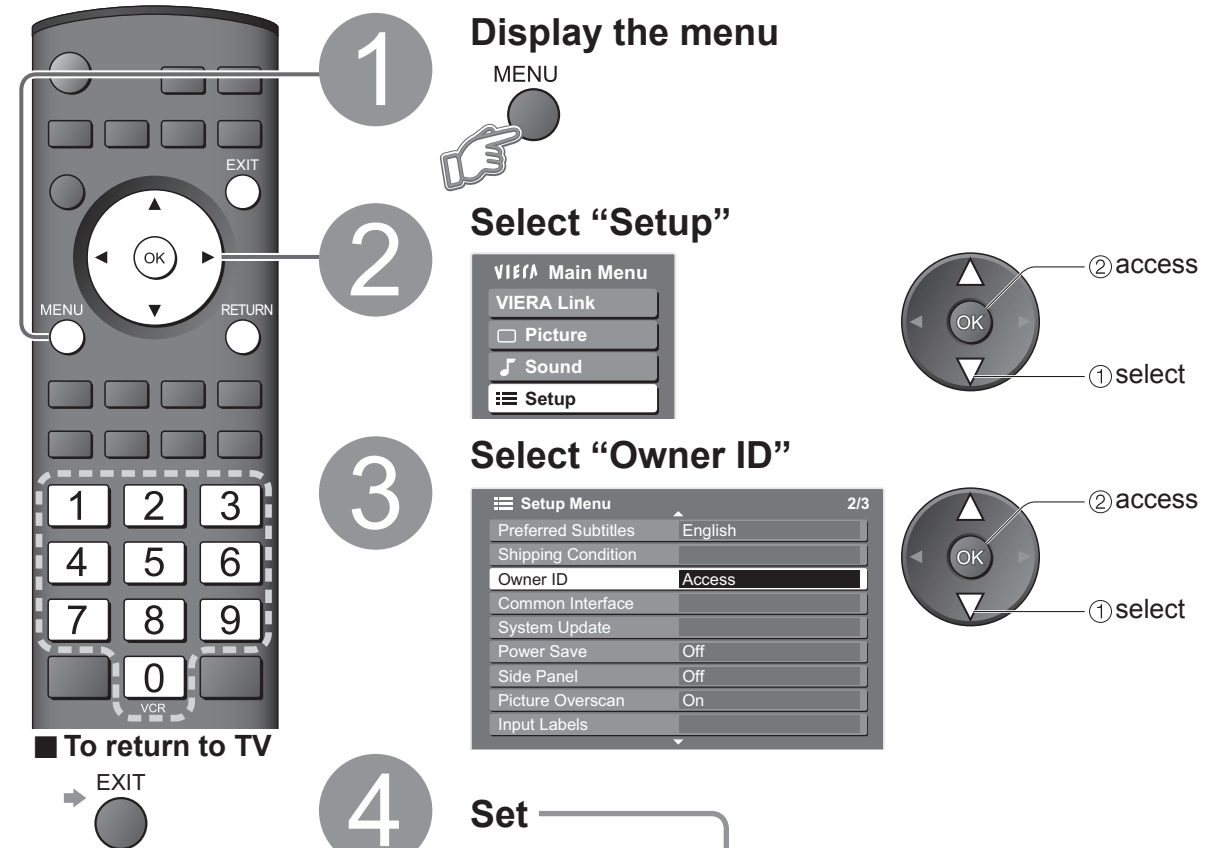
- "Auto Setup" will automatically start when Mains power On / Off switch is next turned On. (p. 12)

■ To re-tune TV channels only, e.g. after moving house

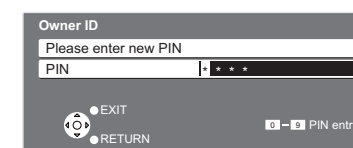
- ➔ "Auto Setup" (p. 32)

Owner ID

Entry of the security code (PIN number) and "personal information" (your name, address and post code).
In the unfortunate event of theft it will help the Police to determine the owner.
If you have skipped the Owner ID input in "Auto Setup" (p. 12), and input it later, start from ①.
If you input the Owner ID in "Auto Setup" (p. 12), perform ④.



① Enter the PIN number (4 digits)

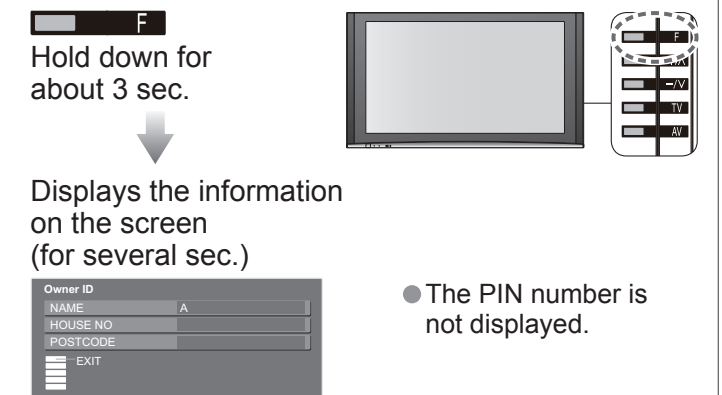


- Enter the PIN number twice at first setting.
- Make a note of the PIN number in case you forget it.

② Enter your name, address, and post code, in that order

- Select the entry field
- Enter the "User input" mode
- Select the character
- Set
- Store

To check the "personal information" stored

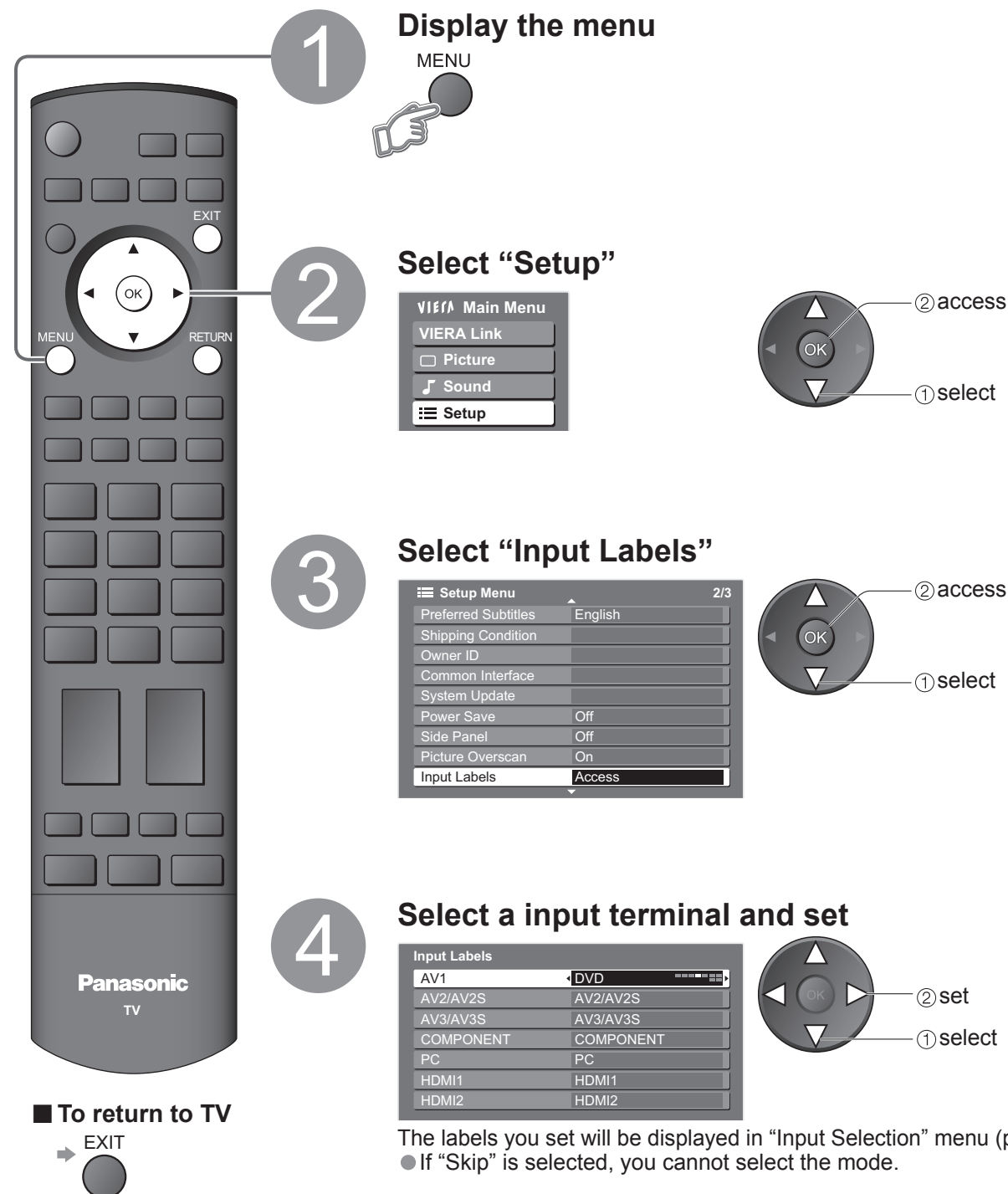


■ To change the PIN number

- Select the "PIN" field
- Enter a new PIN number twice

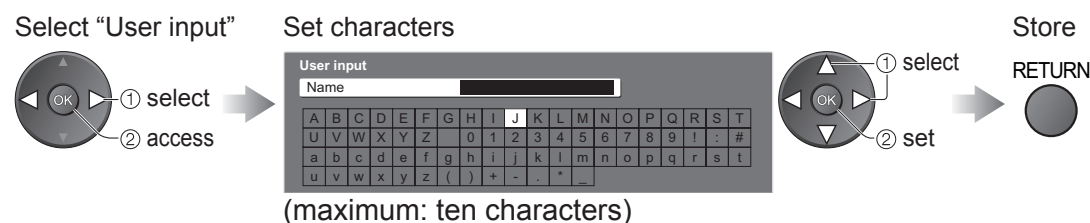
Input Labels

For easier identification and selection of the input mode, you can label each input terminals or skip terminal that is not connected to any equipment.
(To select the input mode ➔ p. 18)



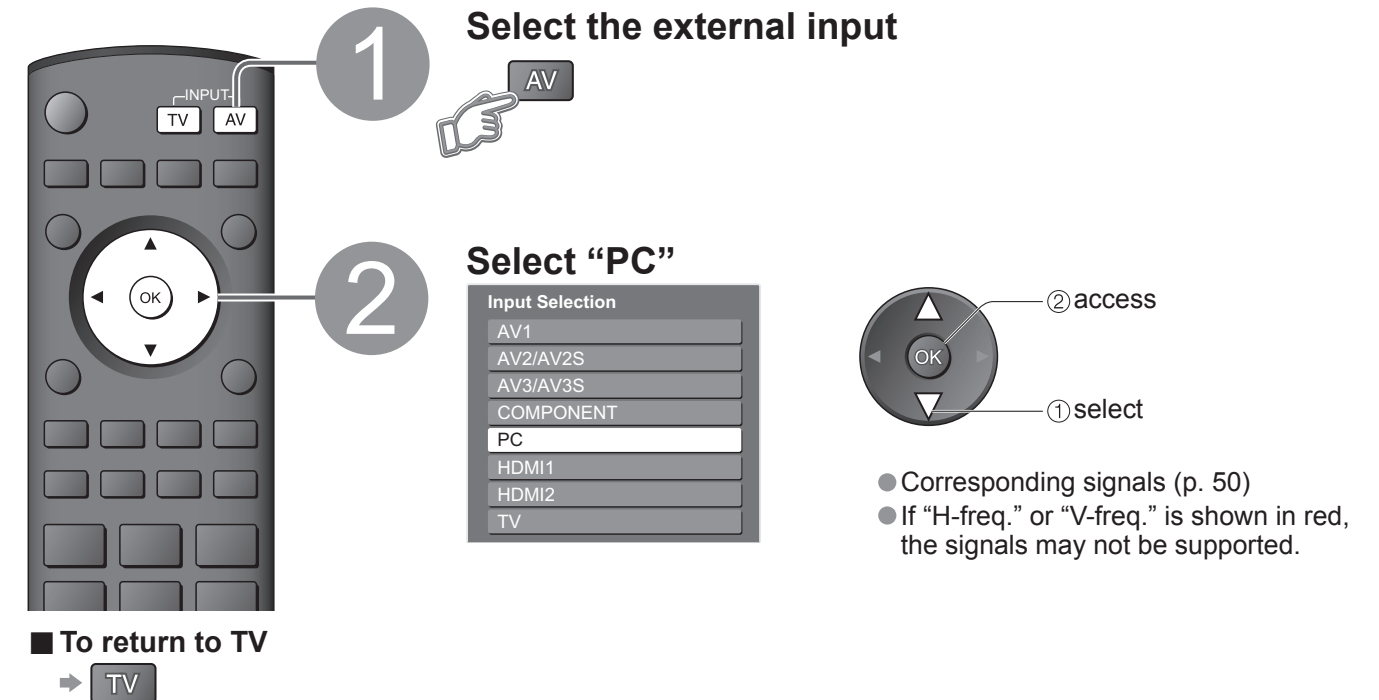
■ **User input**

You can name each input terminals freely.



Displaying PC Screen on TV

The screen of the PC connected to the TV can be displayed on the TV.
You can also listen to PC sound with the audio cable connected. To connect PC (p. 46)



■ **PC menu setting** (changed as desired)

- To make settings ➡ “How to Use Menu Functions” ❶ to ❷ (p. 23)

Menu	Item	Adjustments / Configurations (options)
Picture	Advanced PC Settings	W/B High R White balance of bright red area
		W/B High B White balance of bright blue area
		W/B Low R White balance of dark red area
		W/B Low B White balance of dark blue area
		Gamma (2.0 / 2.2 / 2.5 / S Curve)
Setup	PC Setup	Input Resolution ● VGA (640 × 480 pixels), WVGA (852 × 480 pixels), XGA (1,024 × 768 pixels), WXGA (1,366 × 768 pixels) ● Options change depending on signals
		Clock Set to the minimum level if noise occurs
		H-pos Adjusts horizontal position
		V-pos Adjusts vertical position
		Clock Phase Eliminates flicker and distortion ● Adjust after Clock adjustment ● Set to the minimum level if noise occurs
		Sync Chooses another synchronous signal if the image is distorted (H & V / On G) ● H & V : by the horizontal and vertical signals from your PC On G : by the green signal from your PC (if available)

● Other items ➔ p. 24 and p. 25

Recording Controls (DVB mode)

Timer Programming from Menu

The Timer programming menu allows you to choose programmes that you wish to record. At the correct time, the DVB system will switch on and tune to the correct station (even if the TV is in Standby mode). TV Guide may also be used to set timer programmes. (p. 16)

- If the recording equipment is compatible with Q-Link or similar technologies (p. 42), and setup / connection are done completely (p. 42 and p. 46), you do not need to programme the equipment – the DVB system will control the recording progress.
- If the recording equipment is not compatible with Q-Link or similar technologies, set “Q-Link” in Setup Menu (p. 25) to the connected terminal (AV1 or AV2), and make timer programming of the recording equipment (Read the manuals of the equipment).

- 1** If in Analogue mode **Select DVB**
- 2** Display the menu
- 3** Select “Setup”
- 4** Select “DVB Timer Programming”
- 5** Set
- 6** Store

■ **To return to TV**

■ **To stop recording**

Caution

- The TV must either be On or in standby.
- For preparations of a recording equipment, read the manual of equipment.
- No other DVB channel can be selected during recording. However you can watch analogue channels.
- It may not be possible to record an encrypted programme (which is copy-protected).

- 1 Start making the settings**
- 2 Repeat the operations as below, and set items in the order of 1 to 5**
- 3** **set**
 ● 1, 3 and 4 can also be entered with numeric buttons.

Set timer programming details

Pos.	Name	Date	Start	End	min.	
1	BBC1	6/8 FR	18:00	20:00	120	Off
3	ITV1	7/8 SA	21:30	22:30	60	Off

Previous timer programming event
Current timer programming event

1 Channel
2 Date
3 Starting time
4 Ending time
5 Subtitles (Off / Auto)

● Recording time (automatic display)

● Daily SU-SA: Sunday to Saturday
 ● Daily MO-SA: Monday to Saturday
 ● Daily MO-FR: Monday to Friday
 ● Weekly SA/FR/TH/WE/TU/MO/SU: Same time on the same day every week

one day ahead
daily or weekly (press repeatedly)

■ **To change a timer programming event**
 ➤ Select the programme to be changed using and press .
 ➤ Correct as necessary (as above)

■ **To cancel a timer programming event**
 ➤ Select the programme to be deleted using and press →

Direct TV recording:

You can record the current programme to DVD Recorder or VCR immediately. (p. 42)

Note

- Confirm the DVB LED lights (Orange). If not, a timer programming is not available.
- A message will appear if you try to programme a timer event which overlaps an already programmed event.
- 2 min. before the starting time: a reminder message appears.
 (To remove the message → ; To cancel the programming →)
- 10 sec. before the starting time: in DVB mode, the TV automatically selects the programmed channel.
- Cancelling the programming may not be valid immediately before the starting time. In this case, directly operate the recording equipment to cancel recording.

TV Guide–Electronic Programme Guide (EPG)–Timer Recording

- 1 View TV Guide**
 - There are two styles of display for TV Guide (Landscape / Portrait)
- 2 Select the programme to be broadcast**

(Timer Programming screen)

● **To check / change / cancel a timer programming event** → “Timer Programming” (above)

DVB LED will turn on if Timer Programming is set.

● Orange DVB LED (Rapid blinking during recording)

Viewing from SD Card

The still images recorded by the digital camera will be displayed.



1

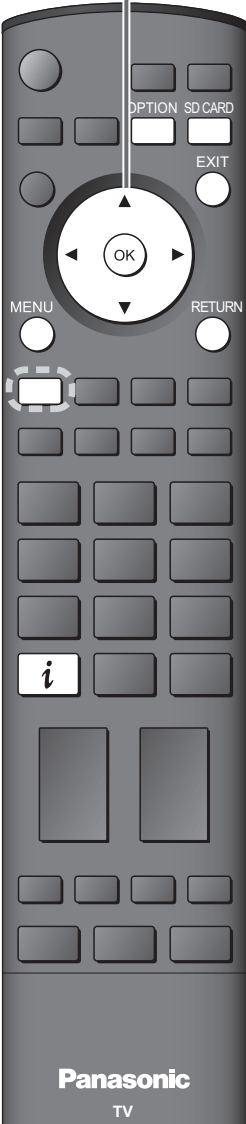
Insert the SD Card

- Warning message for output signal is displayed.

Signal output from all AV terminals will be disabled during SD card view.
Press OK to proceed.
Press EXIT to return to TV viewing.

2

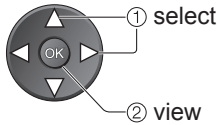
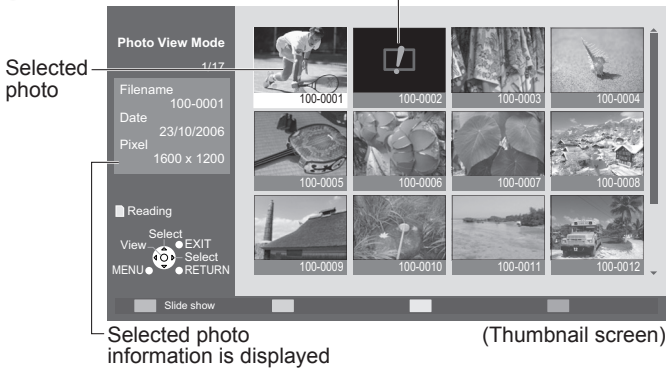
Enter SD mode (Photo View Mode)



3

Select the photo to be viewed

Error display (images that could not be loaded, etc.)

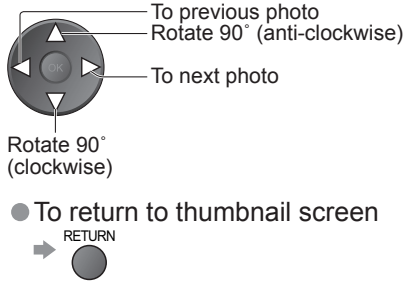
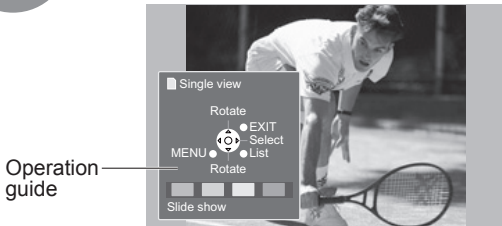


Slide show
red
For details, see p. 41

4

View

- To display the operation guide → **i** or **OPTION**



To return to TV
EXIT or SD CARD

Caution

- During the operation, no signals are output from the monitor output terminals.
- "Date" shows the date on which the recording was made by the digital camera. It shows "***/**/****" when recordings are made without date signal.

Cautions in handling SD Card

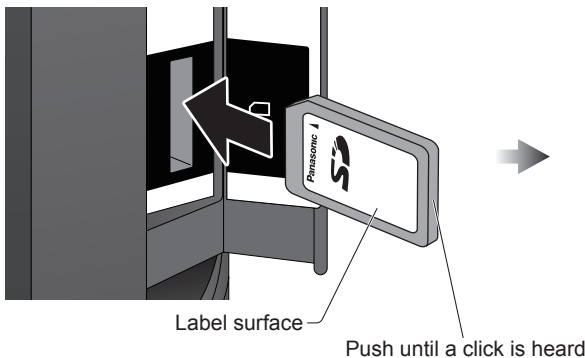
- Do not remove the card while the TV is accessing data (this can damage card or TV).
- Do not touch the pins on the back of the card.
- Do not subject the card to a high pressure or impact.
- Insert the card in the correct direction (otherwise, card may be damaged).
- Electrical interference, static electricity, or erroneous operation may damage the data or card.
- Back up the recorded data at regular intervals in case of deteriorated or damaged data or erratic operation of the TV. (Panasonic is not liable for any deterioration or damage of recorded data.)

(Photos)

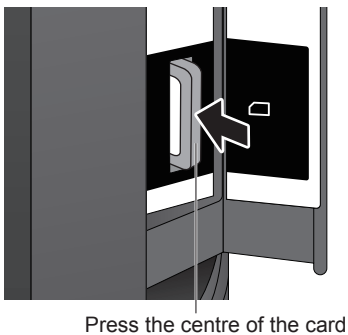
SD Card

- For details on SD Cards (p. 49)

To insert



To remove



Slide show

Start Slide show (operate in step 3 or 4)

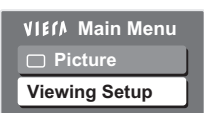
- 1 Select the photo for the first view
- 2 Start Slide show



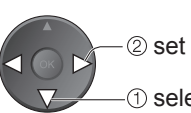
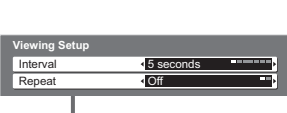
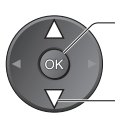
- To pause → OK

Slide show settings (operate in step 3 or 4)

- 1 Display the menu
- 2 Select "Viewing Setup"
- 3 Select the functions and set



- "Picture Menu" (p. 24)



Menu	Item	Adjustments / Configurations (alternatives)
Viewing Setup	Interval	Select slide show interval (5 / 10 / 15 / 30 / 60 / 90 / 120 seconds)
	Repeat	Slide show repeat (Off / On)

On screen messages

Message	Meaning / Action
Is SD Card in?	Insert a SD card.
No valid file to play	The card has no data.
Cannot read file	The file is broken or unreadable. The TV does not support the format. (For the applicable formats and data, see p. 49.)

Q-Link Functions

Q-Link connects the TV and VCR / DVD recorder, enables easy recording and playback.

■ **Condition**

- Use the VCR / DVD recorder with the following logos:
“Q-Link”, “NEXTVIEWLINK”, “DATA LOGIC”, “Easy Link”, “Megalogic”, or “SMARTLINK”
- Connect the equipment to this TV’s AV1 or AV2 terminal via a “fully-wired” SCART cable. (p. 46)
- Q-Link terminal setup in Setup Menu (Q-Link, AV1 / AV2 out). (p. 25)

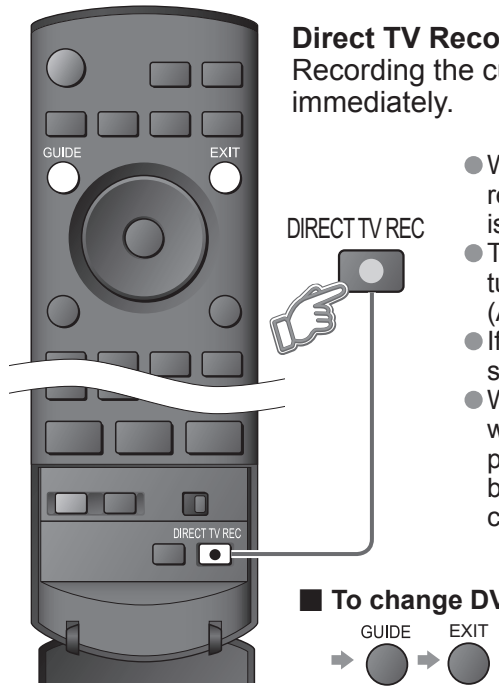
■ **Download analogue channel settings**

- Perform Auto Setup. (p. 32)
When first using this TV, see “Auto Setup”. (p. 12)
- Perform download to the equipment. (p. 25)

■ **Features available**

Some recording equipments are not applicable. Read the manuals of the equipment.

What you see is What you record



Direct TV Recording:
Recording the current programme in VCR / DVD recorder immediately.

- When Direct TV Recording is performed, the recording equipment is automatically turned on if it is in Standby mode.
- The recording equipment is recording from its own tuner. You can turn the TV off during recording (Analogue only).
- If you turn the TV off during recording from an AV source, the recording will be stopped.
- When Direct TV Recording is performed while watching DVB channel, the DVB programme position is locked and no other DVB channel can be selected. However you can watch analogue channels.

■ **To change DVB channel, stop recording**

→ GUIDE → EXIT

Information / Message

Recording information or if recording is not possible, a message is displayed. (Only when the programme number is “0” or “AV mode” for some equipment.)

Power on link and Easy playback

When VCR or DVD recorder starts playback or direct navigator / function menu for the equipment are activated, the TV is turned on and input mode is switched automatically so that you can view the content. (Only when TV is in Standby mode.)

Power off link

When TV is set to Standby mode, the recording equipment is also automatically set to Standby. (Only when the videocassette or DVD is not active.)

• “DATA LOGIC” (a trademark of Metz Corporation)
• “Easy Link” (a trademark of Philips Corporation)
Read the manuals of the equipment too.

• “Megalogic” (a trademark of Grundig Corporation)
• “SMARTLINK” (a trademark of Sony Corporation)

HDMI Functions

HDMI (high-definition multimedia interface) allows you to enjoy high-definition digital images and high-quality sound by connecting the TV and the equipment.
HDMI-compatible equipment (*1) with an HDMI or DVI output terminal, such as a set top box or a DVD player, can be connected to the HDMI terminal using an HDMI compliant (fully wired) cable.
About connections, see “External Equipment” (p. 46).

- Note
- HDMI is the world’s first complete digital consumer AV interface complying with a non-compression standard.
 - If the external equipment has only a DVI output, connect to the HDMI1 terminal via a DVI to HDMI adapter cable (*2).
 - When the DVI to HDMI adapter cable is used, connect the audio cable to the audio input terminal (HDMI1: use COMPONENT-AUDIO terminals).
 - Audio settings can be made on the “HDMI1 Input” menu screen. (p. 24)
 - Applicable audio signal sampling frequencies (2ch L.PCM): 48 kHz, 44.1 kHz, 32 kHz
 - HDMI2 terminal is for digital audio signal only.
 - Use with a PC is not assumed.
 - If the connected equipment has an aspect adjustment function, set the aspect ratio to “16:9”.
 - These HDMI connectors are “type A”.
 - These HDMI connectors are compatible with HDCP (High-Bandwidth Digital Content Protection) copyright protection.
 - An equipment having no digital output terminal may be connected to the input terminal of either “Component”, “S-VIDEO”, or “Video” to receive analogue signals.
 - The HDMI input terminal can be used with only the following image signals:
480i, 480p, 576i, 576p, 720p, 1080i and 1080p. Match the output setting of the digital equipment.
 - For details of the applicable HDMI signals, see p. 50.

(*1): The HDMI logo is displayed on HDMI-compliant equipment.
(*2): Enquire at your local digital equipment retailer shop.

■ **Summary of Control functions**
Connecting with an HDMI cable to Panasonic equipment with VIERA Link function, you can control the equipment (p. 44). You can use VIERA Link and Q-Link functions together.

Function	Connection	VIERA Link and Q-Link (HDMI)	VIERA Link only (HDMI)	Q-Link only (SCART)
Easy playback		○	○	○
Power on link		○	○	○
Power off link		○	○	○
Speaker control		○ (not via SCART)	○	—
Access and control the connected equipment by VIERA remote control		○ (not via SCART)	○	—
Direct TV Recording		○ (not via HDMI)	—	○
Analogue channel download		○ (not via HDMI)	—	○

HDMI Functions

VIERA Link “HDAVI Control”TM *

*Enjoy additional HDMI Inter-Operability with Panasonic products which have “HDAVI Control” function. This TV supports “HDAVI Control 2” function. Connections to some Panasonic equipment (DVD Recorder DIGA, HD Video Camera, Player theatre, Amplifier, etc.) with HDMI cables allow you to interface them automatically. The equipment with “HDAVI Control” function enables the following operations:

- Easy playback (p. 45)
- Power on link (p. 45)
- Power off link (p. 45)
- Speaker control (p. 45)

In addition, the equipment with “HDAVI Control 2” function enables the following operation:

- Access and control the connected equipment by VIERA remote control (p. 45)

These features are limited to models incorporating Panasonic’s “HDAVI Control” and “VIERA Link”. VIERA Link “HDAVI Control”, based on the control functions provided by HDMI which is an industry standard known as HDMI CEC (Consumer Electronics Control), is a unique function that we have developed and added. As such, its operation with other manufacturers’ equipment that supports HDMI CEC cannot be guaranteed.

Refer to individual manuals for compatibility information. About applicable equipment, consult your local Panasonic dealer or refer to the URL: www.panasonic.co.uk

HDMI cable

This function needs an HDMI compliant (fully wired) cable. Non-HDMI-compliant cables cannot be utilized. It is recommended that you use Panasonic’s HDMI cable. Recommended part number:


- RP-CDHG15 (1.5 m)
- RP-CDHG30 (3.0 m)
- RP-CDHG50 (5.0 m)

Preparations

Setup the equipment to enable this function. Read the manuals of the equipment. About connections, see “External Equipment” (p. 47). Read the manuals of the equipment too.

For the first time / When adding new equipment, reconnecting equipment or changing setup

After connection turn the equipment on and then switch the TV on. Select the input mode to HDMI1 or HDMI2 (p. 18), and make sure that an image is displayed correctly.



1

Display the menu

2

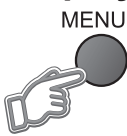
Select “Setup”

3


Select “VIERA Link”

4

Set to “On”
(default is On)

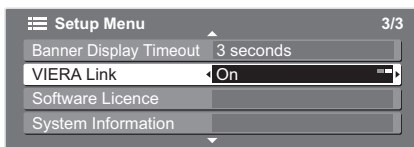


MENU



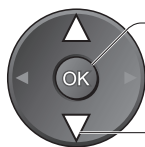
VIERA Main Menu

- VIERA Link
- Picture
- Sound
- Setup




Setup Menu 3/3

- Banner Display Timeout 3 seconds
- VIERA Link On
- Software Licence
- System Information




② access

① select



select





set


You can control some functions of the connected Panasonic equipment with this TV remote control (point the remote control at the TV’s signal receiver).

- If you cannot access the menu, check the settings and the equipment (p. 44).


Access and operate the menu of the equipment

- ① Display “VIERA Link Menu” → 
 - ② Select “VIERA Link Control”


VIERA Link Menu

 - VIERA Link Control
 - Recorder
 - Speaker Selection
 - Home Cinema
 - ③ Select the equipment you want to access
 - “Home Cinema” means Player theatre, Recorder theatre and Amplifier.
- 

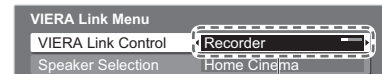
select



① select

② access

When the equipment with “HDAVI Control 2” function is connected

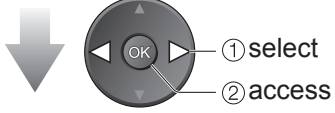


VIERA Link Menu

- VIERA Link Control
- Recorder
- Speaker Selection
- Home Cinema

Recorder / Player / Home Cinema / Video Camera

Displayed the type of the connected equipment. Select the type of the equipment and access.




① select

② access

The menu of the accessed equipment (Input mode will be changed automatically)

When the equipment with “HDAVI Control” function is connected




VIERA Link Menu

- VIERA Link Control
- Recorder
- Speaker Selection
- Home Cinema

Recorder / Player / Home Cinema / Video Camera

Displayed the type of the connected equipment. But you cannot access it. Use its own remote control to operate the equipment.

When other type or other manufacturer of the equipment is connected



VIERA Link Menu








- VIERA Link Control
- Others
- Speaker Selection
- Home Cinema

Others

“Others” is displayed. You cannot access it. Use its own remote control to operate the equipment.

Operate the menu of the equipment

- Available VIERA remote control buttons (depending on the connected equipment):

	Move the cursor / select the menu		Exit the menu
	Move the cursor / access / adjust		Display the operation guide for the equipment The same functions with the OPTION button of the equipment
	Store / set / access		
	Return to the previous menu		Access when the key words are displayed on colour bar

- About the operations for the equipment, read the manual of the equipment.

Easy playback

Automatic Input switching-When the connected Panasonic equipment is operated, input mode is switched automatically. When it is stopped operating, input mode is returned.

Power on link

When the connected Panasonic equipment starts playback or direct navigator / function menu for the equipment are activated, the TV is automatically turned on. (Only when TV is in Standby mode.)

Power off link


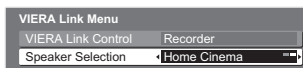
When TV is set to Standby mode, the connected Panasonic equipment is also automatically set to Standby.

- This function will work even if the TV enters standby mode automatically by Off Timer function or auto power standby function.


Speaker control

You can control the theatre speaker with TV’s remote control. This function is available when Panasonic Amplifier or Player theatre is connected.


- If you cannot access the menu, check the settings and the equipment (p. 44).

- ① Display “VIERA Link Menu” → 
 - ② Select “Speaker Selection”


VIERA Link Menu


 - VIERA Link Control
 - Recorder
 - Speaker Selection
 - Home Cinema
 - ③ Set to “Home Cinema” or “TV”



select



set
- Home Cinema

Amplifier or Player theatre will be automatically turned on (if it is in Standby mode) and the sound is from theatre speakers connected to the equipment.

Volume up / down → 

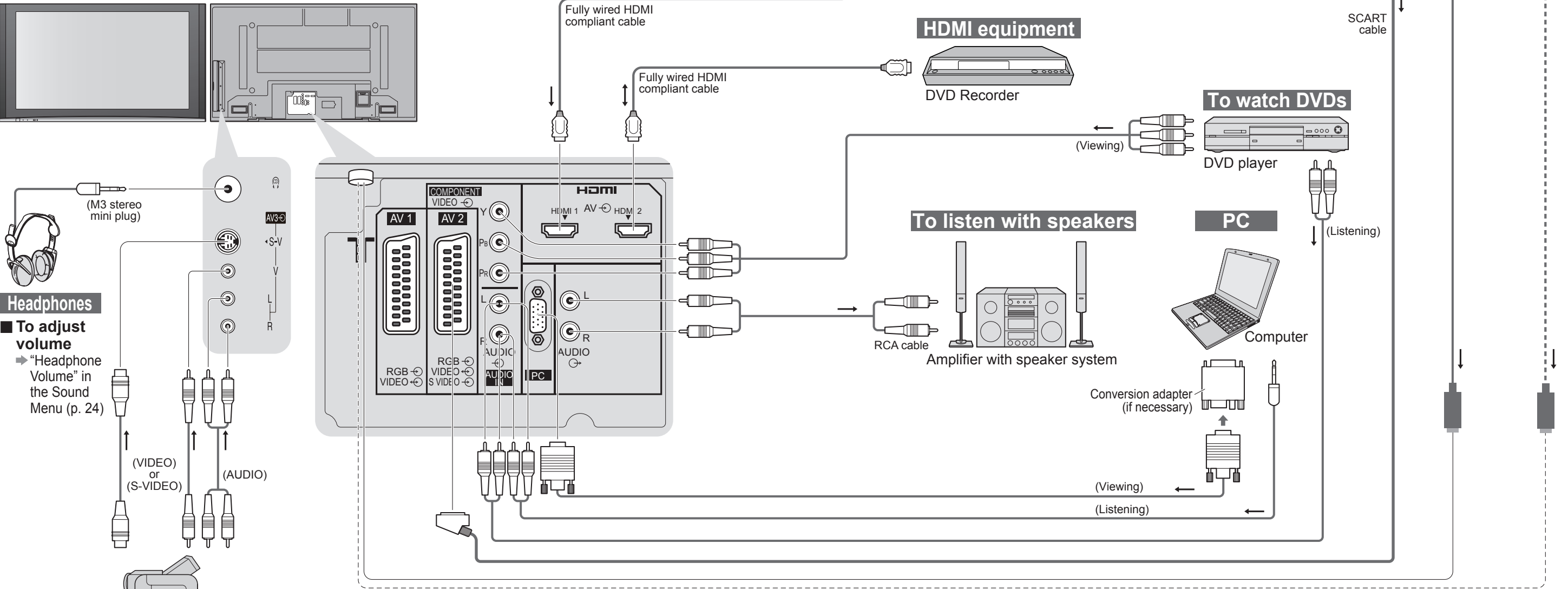
Mute → 

 - The sound of TV speakers is mute.
 - When the equipment is turned off, TV speakers will be active.
- TV

TV speakers are active.

External Equipment

These diagrams show our recommendations for how to connect the TV to your various equipment. For other connections, consult the instructions for each piece of equipment, the table below, and the specifications (p. 55).



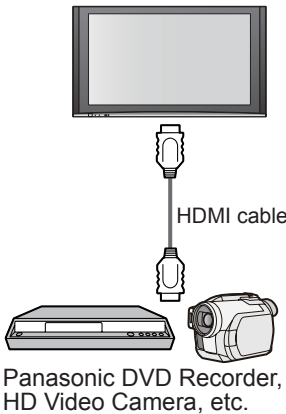
Camcorder / Game equipment							
Types of connectable equipment to each connector							
Connector	AV1	AV2	AV3 (Side of TV)	COMPONENT	AUDIO OUT	HDMI	
				Y Pb Pr L R	L R	1	2
Recording / Playback (equipment)							
■ To record / playback videocassettes / DVDs (VCR / DVD recorder)	○	○					
■ To watch DVDs (DVD player)	○	○	○	○		○	○
■ To watch camcorder images (Video camera)	○	○	○			○	○
■ To watch satellite broadcasts (Set top box)	○	○	○			○	
■ To play games (Game equipment)	○	○	○				
■ To use amplifier with speaker system					○		
■ Q-Link	○	○					
■ Direct TV Recording	○	○					
■ VIERA Link						○	○

○: Recommended Connection

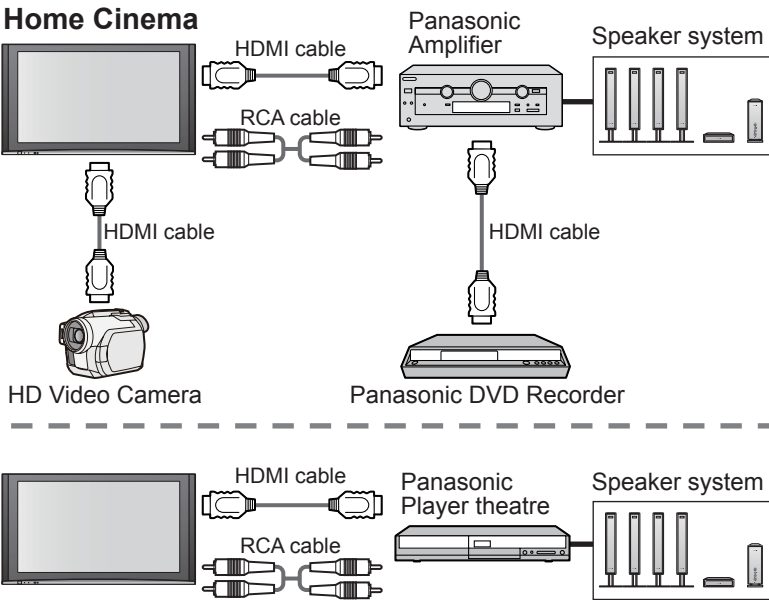
VIERA Link (p. 44)

- Use fully wired HDMI compliant cable.
- Read the manuals of the equipment too.

Easy playback, Access and control the connected equipment by VIERA remote control



Home Cinema



Technical Information

Aspect Ratio

The optimum size and aspect can be chosen, and you can enjoy finer images. (p. 15)

■ **Auto:** Auto aspect determines the best aspect ratio to use to fill your screen. It does this using a four step process to determine if the picture being viewed is a widescreen picture.

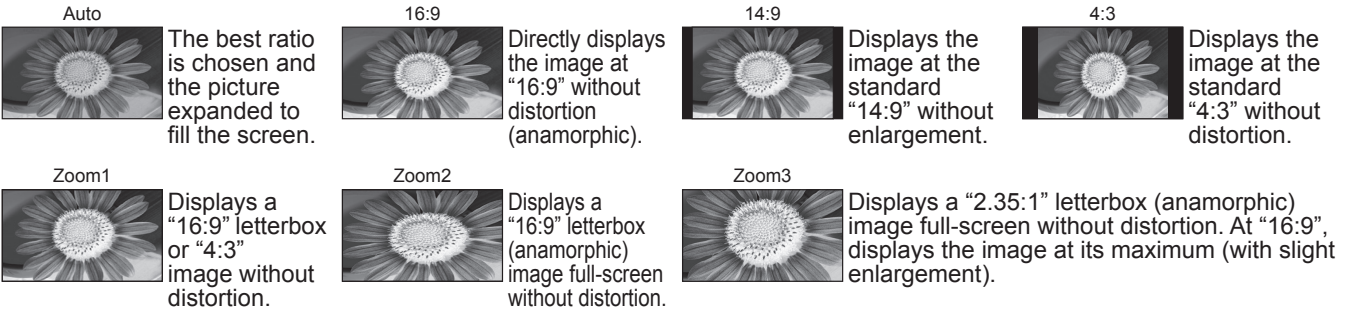
If Auto aspect detects a widescreen signal it switches into the appropriate 16:9 or 14:9 widescreen mode. If Auto aspect does not detect a widescreen signal then this advanced TV enhances the picture for optimum viewing pleasure.

The text shown on the screen indicates how Auto aspect determined which ratio to use:

“WIDE” appears in the top left of the screen if a widescreen identification signal (WSS) is found or a signal found through a SCART terminal. Auto aspect switches to the appropriate 16:9 or 14:9 widescreen ratio. This function will also work in any aspect mode. “Auto” appears in the top left of the screen if black stripes above and below the picture are detected. Auto aspect chooses the best ratio and expands the picture to fill the screen. This process can take several minutes, depending on the darkness of the picture.

		Aspect modes							Aspect Control Signal									
									Widescreen signal (WSS)					Control signal through SCART (pin 8) or HDMI terminal				
Signal name		Auto	16:9	14:9	4:3	Zoom1	Zoom2	Zoom3	TV	AV1	AV2	AV3	Component	AV1	AV2	HDMI1	HDMI2	
TV/AV1/AV2/AV3	PAL	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
	PAL 525/60	○	○	○	○	○	○	○	○	—	—	—	—	—	○	○	—	
	DVB	○	○	○	○	○	○	○	○	○	—	—	—	—	—	—	—	
	M.NTSC	○	○	○	○	○	○	○	○	—	—	—	—	—	○	○	—	
	NTSC (AV input only)	○	○	○	○	○	○	○	○	—	—	—	—	—	○	○	—	
Component/HDMI	SD	525(480)/60i	○	○	○	○	○	○	○	—	—	—	—	—	—	—	○	○
		525(480)/60p	○	○	○	○	○	○	○	○	—	—	—	—	—	—	○	○
		625(576)/50i	○	○	○	○	○	○	○	○	—	—	—	—	○	—	○	○
		625(576)/50p	○	○	○	○	○	○	○	○	—	—	—	—	○	—	○	○
	HD	750(720)/50p	○	○	○	○	○	○	○	○	—	—	—	—	—	—	○	○
		750(720)/60p	○	○	○	○	○	○	○	○	—	—	—	—	—	—	○	○
		1125(1080)/50i	○	○	○	○	○	○	○	○	—	—	—	—	—	—	○	○
		1125(1080)/60i	○	○	○	○	○	○	○	○	—	—	—	—	—	—	○	○
		1125(1080)/50p	○	○	○	○	○	○	○	○	—	—	—	—	—	—	○	○
1125(1080)/60p	○	○	○	○	○	○	○	○	—	—	—	—	—	—	○	○		
PC input		—	○	—	○	—	—	—	—	—	—	—	—	—	—	—	—	

- Note**
- The ratio varies depending on the programme, etc. If the ratio is greater than the standard “16:9”, black bands may appear at the top and bottom of the screen.
 - If the screen size looks unusual when a widescreen-recorded programme is played back on a VCR, adjust the tracking of the VCR. (See the VCR manual.)
 - Aspect mode can be memorized for SD (Standard definition) and HD (High definition) signals separately.
 - To select the ratio manually: (Only “16:9” or “4:3” in PC mode)



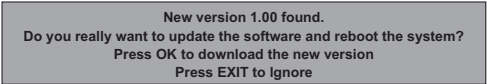
VIERA Link “HDAVI Control™”

- HDMI connections to some Panasonic equipment allow you to interface them automatically. (p. 44)
- This function may not work normally depending on the equipment condition.
 - Image or sound may not be available for the first few seconds when the playback starts.
 - Image or sound may not be available for the first few seconds when Input mode is switched.
 - Volume function will be displayed when adjusting the volume of the equipment.
 - Easy playback is also available by using the remote control for Amplifier or Player theatre. Read the manuals of the equipment.
 - If more than one equipments of the same type are connected to the TV by HDMI cables, for example two DIGA DVD recorders to HDMI1 and 2, VIERA Link will only be available for the lower terminal number, in this case HDMI1.
 - “HDAVI Control 2” is the newest standard (current as of February, 2007) for Panasonic's HDAVI Control compatible equipment. This standard is compatible with Panasonic's conventional HDAVI equipment.

Updating the DVB software

From time to time, a new version of software for DVB mode may become available for download to enhance performance or operations of the TV.

A notification banner will appear when you tune to one of the BBC channels, or you can search for a new version software by using the “System Update Search Now” function (p. 29).



- To start downloading press “OK”, this may take up to 20 minutes to complete.
- To ignore the new software press “EXIT”, but this banner will keep appearing during the period of new software availability, usually 2 to 3 days.
- To download any new software automatically, ensure that the “Auto Update Search in Standby” function in the System Update menu is set to “On” (p. 29).
- The TV will then download new software automatically at night if it is left in standby without any timer programme in progress.

- Note**
- During software download and update, DO NOT switch off the TV.

Data format for Card browsing

- Photo : Still images recorded with digital still cameras compatible with JPEG files of DCF* and EXIF standards
- Data format : Baseline JPEG (Sub-sampling 4:4:4, 4:2:2 or 4:2:0)
- Max. number of files : 9,999
- Image resolution : 160 × 120 to 10,000,000
- Compliant card type (maximum capacity): SDHC Card (4 GB), SD Card (2 GB), Multi Media Card (128 MB), miniSD Card (1 GB) (requiring miniSD adapter)
 - If miniSD Card is used, insert / remove it together with the adapter.
 - Check the latest information on the card type at the following website. (English only)
- <http://panasonic.co.jp/pavc/global/cs/>

*DCF (Design rule for camera file system): Unified standard established by Japan Electronics and Information Technology Industries Association (JEITA).

- Note**
- A JPEG image modified with a PC may not be displayed.
 - Images imported from a PC must be compatible with EXIF (Exchangeable Image File) 2.0, 2.1, and 2.2.
 - Partly degraded files might be displayed at a reduced resolution.
 - Only “.JPG” extension can be read by this TV.
 - The folder and file names may be different depending on the digital camera used.
 - Do not use two-byte characters or other special codes.
 - The card may become unusable with this TV if file or folder names are changed.

SCART, S-VIDEO and HDMI terminal information

■ **AV1 SCART terminal**
(RGB, VIDEO, Q-Link)
Suitable inputs for AV1 include RGB (Red / Green / Blue).

■ **AV2 SCART terminal**
(RGB, VIDEO, S-VIDEO, Q-Link)
AV2 - Pins 15 and 20 are dependent on AV2 S-VHS / VIDEO switching.

■ **AV3 S-VIDEO 4 pin terminal**

■ **HDMI terminal**

Technical Information

PC connection

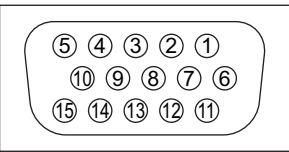
- A PC may be connected to this TV so that the PC screen is displayed and sound is heard from the TV.
- PC signals that can be inputted: Horizontal scanning frequency 31 to 69 kHz; vertical scanning frequency 59 to 86 Hz (more than 1,024 signal lines could result in incorrect display of the image).
 - A PC adapter is not necessary for the DOS/V-compliant D-sub 15-pin connector.

Note

- Some PC models cannot be connected to this TV.
- When using PC, set the colour display quality of PC to the highest position.
- For details of the applicable PC signals, see below.
- Max. display resolution

Aspect	4:3	1,440 × 1,080 pixels
	16:9	1,920 × 1,080 pixels

- D-sub 15-pin connector signal



Pin No.	Signal Name	Pin No.	Signal Name	Pin No.	Signal Name
①	R	⑥	GND (Ground)	⑪	NC (not connected)
②	G	⑦	GND (Ground)	⑫	NC (not connected)
③	B	⑧	GND (Ground)	⑬	HD
④	NC (not connected)	⑨	NC (not connected)	⑭	VD
⑤	GND (Ground)	⑩	GND (Ground)	⑮	NC (not connected)

Input signal that can be displayed

COMPONENT (Y, P_B, P_R), HDMI

* Mark: Applicable input signal

Signal name	COMPONENT	HDMI
525 (480) / 60i	*	*
525 (480) / 60p	*	*
625 (576) / 50i	*	*
625 (576) / 50p	*	*
750 (720) / 60p	*	*
750 (720) / 50p	*	*
1,125 (1,080) / 60i	*	*
1,125 (1,080) / 50i	*	*
1,125 (1,080) / 60p	*	*
1,125 (1,080) / 50p	*	*

PC (D-sub 15P)

Signal name	Horizontal frequency (kHz)	Vertical frequency (Hz)
640 × 400 @70 Hz	31.47	70.07
640 × 480 @60 Hz	31.47	59.94
640 × 480 @75 Hz	37.50	75.00
800 × 600 @60 Hz	37.88	60.32
800 × 600 @75 Hz	46.88	75.00
800 × 600 @85 Hz	53.67	85.06
852 × 480 @60 Hz	31.44	59.89
1,024 × 768 @60 Hz	48.36	60.00
1,024 × 768 @70 Hz	56.48	70.07
1,024 × 768 @75 Hz	60.02	75.03
1,024 × 768 @85 Hz	68.68	85.00
1,280 × 1,024 @60 Hz	63.98	60.02
1,366 × 768 @60 Hz	48.39	60.04
Macintosh13" (640 × 480)	35.00	66.67
Macintosh16" (832 × 624)	49.73	74.55
Macintosh21" (1,152 × 870)	68.68	75.06

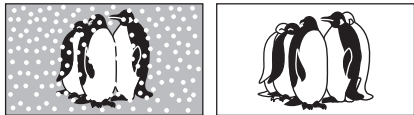
Note

- Signals other than above may not be displayed properly.
- The above signals are reformatted for optimal viewing on your display.
- Applicable input signal for PC is basically compatible to VESA standard timing.
- PC signal is magnified or compressed for display, so that it may not be possible to show fine detail with sufficient clarity.

FAQs

Before requesting service or assistance, please follow these simple guides to resolve the problem. If problem still persists, please contact your local Panasonic dealer or Panasonic Customer Care Centre for assistance. For details (p. 56)

White spots or shadow images (noise)



- Check the position, direction, and connection of the aerial.

Neither image nor sound is produced

- Is the TV in "AV mode"?
- Is the mains lead plugged into the socket outlet?
- Is the TV turned On?
- Check Picture Menu (p. 24) and volume.
- Check all required SCART cables and connections are firmly in place.

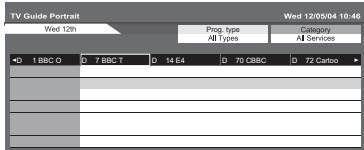
Auto aspect

- Auto aspect is designed to provide you with the best aspect ratio to use to fill your screen. For user control please see p. 48.

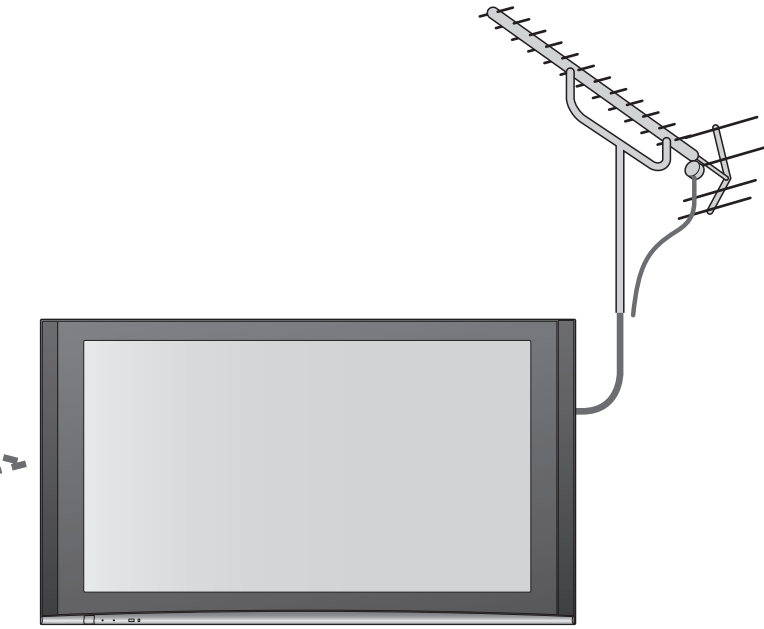
S-Video / black and white picture

- Using AV button please confirm your selection is S-Video i.e. AV2/AV2S (p. 18).

No programmes shown on TV Guide



- Check the DVB transmitter.
- Adjust the direction of the aerial to another transmitter installed nearby.
- Check the analogue broadcast. If the image quality is poor, check the aerial and consult your nearest dealer.



On Screen messages - i.e. EC/AV1

- You can simply clear these by pressing the **i** button. Press again to redisplay.

Direct TV record / Q-Link functions not recording

- Please confirm SCART cable and connection. Also please set "AV1 / AV2 out" in the Setup Menu (p. 25).

Permanently lit spots on screen

- Due to production process involved in this technology this may result in some pixels which are permanently lit or unlit. This is not a malfunction.

Contrast is reduced

- Contrast is lowered when the following conditions without any user operation for a few minutes:
 - no signal in DVB or AV mode
 - selected locked channel
 - selected invalid channel
 - selected radio channel
 - displayed menu
 - Digital teletext (no video contents)
 - Thumbnail or still picture in SD Card mode

FAQs

	Problem	Actions
Screen	Chaotic image, noisy	<ul style="list-style-type: none">● Set "P-NR" in the Picture Menu (to remove noise). (p. 24)● Check nearby electrical products (car, motorcycle, fluorescent lamp).
	No image can be displayed	<ul style="list-style-type: none">● Is "Colour" or "Contrast" in the Picture Menu set to the minimum? (p. 24)
	Blurry or distorted image (no sound or low volume)	<ul style="list-style-type: none">● Reset channels. (p. 32)
	Unusual image is displayed	<ul style="list-style-type: none">● Turn off the TV with Mains power On / Off switch, then turn it on again.
Sound	No sound is produced	<ul style="list-style-type: none">● Is "Sound mute" active? (p. 9)● Is the volume set to the minimum?
	Sound level is low or sound is distorted	<ul style="list-style-type: none">● Sound signal reception may be deteriorated.● Set "NICAM" (p. 24) in the Sound Menu to "Off". (Analogue only)
	Whirling sound is heard	<ul style="list-style-type: none">● The sound is from built-in cooling fan (not a sign of faulty operation).
	<ul style="list-style-type: none">● Due to the digital reception technologies involved, quality of the DTV signals may be relatively low in some cases, despite good reception of analogue programmes.	
DVB	Interference or frozen / disappearing image in DVB	<ul style="list-style-type: none">● Check "DVB Signal Condition". (p. 33) If "Signal Quality" or "Signal Strength" are displayed in red, check aerial. If problem persists, consult your local Panasonic dealer.● Turn the TV off with the Mains power On / Off switch, then turn it On again.
HDMI	Sound is unusual	<ul style="list-style-type: none">● Set the sound setting of the connected equipment to "2ch L.PCM".● Check the "HDMI1 Input" setting in the Sound Menu. (p. 24)● If digital sound connection has a problem, select analogue sound connection. (p. 43)
	Pictures from external equipment are unusual when the equipment is connected via HDMI	<ul style="list-style-type: none">● Is the HDMI cable connected properly? (p. 46)● Turn Off the TV and equipment, then turn them On again.● Check an input signal from the equipment. (p. 50)● Use an equipment compliant with EIA/CEA-861/861B.
	"VIERA Link" function does not work and an error message appears	<ul style="list-style-type: none">● Confirm the connection.● Turn the connected equipment on and then switch the TV on. (p. 44)
	TV goes into "Standby mode"	<ul style="list-style-type: none">● Off Timer function is activated.● The TV enters "Standby mode" about 30 min. after analogue broadcasting ends.
Other	The remote control does not work	<ul style="list-style-type: none">● Are the batteries installed correctly? (p. 6)● Has the TV been switched On?
	An error message appears	<ul style="list-style-type: none">● Follow the message's instructions.● If the problem persists, contact the authorized Service Centre.

On screen messages

Message	Meaning / Action
All tuning data will be erased	<ul style="list-style-type: none">● "Shipping Condition" will erase all tuning data (p. 34).● "Auto Setup" will be erased all present DVB and Analogue tuning datas (p. 32).
Are you sure ?	<ul style="list-style-type: none">● Make sure the operation is with your desire.
Are you sure you want to delete this timer ? Press OK to delete timer Press Exit to return	<ul style="list-style-type: none">● Make sure the deleting programme event is with your desire.
Bad Signal	<ul style="list-style-type: none">● The signal is weak. Check the aerial.
DOWNLOAD IN PROGRESS PLEASE WAIT	<ul style="list-style-type: none">● Q-Link channel download is in progress.
Feature not available	<ul style="list-style-type: none">● Check the Q-Link connection and setting (p. 42).● The impossible source (Component / HDMI / PC) to be record.
Invalid DVB Channel	<ul style="list-style-type: none">● Invalid DVB channel is selected.
Invalid system time. Please exit !	<ul style="list-style-type: none">● Cannot get the time information. Check the connection of the RF cable.
Max. number of Timers already set !	<ul style="list-style-type: none">● Maximum timer programming event is 8.
New DVB Service Found! Press OK start Auto Setup Press EXIT to Ignore. Selecting Auto Setup will delete current Profile and Childlock settings	<ul style="list-style-type: none">● There is a new DVB station.
New version 1.90 found. Do you really want to update the software and reboot the system ? Press OK to download the new version Press EXIT to Ignore	<ul style="list-style-type: none">● There is a new software available.
No DVB Service found	<ul style="list-style-type: none">● No DVB signal can be found in Auto Setup.
No module inserted	<ul style="list-style-type: none">● Check the CI module inserted completely (p. 29).
No Recording - Check Tape or Disc	<ul style="list-style-type: none">● The tape or disc may be "write protected", missing or damaged. The equipment may already be recording.
No Recording - UNKNOWN REASON	<ul style="list-style-type: none">● The recording cannot be done by any reason. Check the equipment.● Disc or tape may be full.
No Service	<ul style="list-style-type: none">● The station stops the services.
No Signal	<ul style="list-style-type: none">● Check the connection of the RF cable.

On screen messages

Message	Meaning / Action
No stations found Please insert the aerial	▶ ● No analogue signal can be found in Auto Setup.
PIN incorrect !	▶ ● The PIN number you entered is wrong.
Please check aerial or local DVB service availability. Press OK to start Auto Setup	▶ ● Please follow the message. If it is still failed, consult your local Panasonic dealer.
Please check settings and connections on HDMI devices.	▶ ● Communication error in VIERA Link function (p. 44).
Please wait.	▶ ● A function is in progress.
Recording in progress	▶ ● The recording equipment is recording the programme signal from its own tuner. You can turn the TV off and leave the equipment recording in the normal way.
Shipping condition completed. TV can now be switched off.	▶ ● “Auto Setup” will automatically start when Mains power On / Off switch is next turned On. (p. 12)
Software successfully updated Press EXIT to continue	▶ ● The software updating is finished.
Software Update failed. Please try again later. Press EXIT to continue	▶ ● Perform “System Update Search Now” in System Update (p. 29). If it is still failed, there may not be the new software.
This service is locked ! Press OK to enter PIN	▶ ● The selected channel is locked in Child Lock (p. 31).
Timer already expired !	▶ ● Starting time in Timer Programming is already past. Set correctly (p. 39).
Timer Event Due to Start DVB 1: BBC1 has been programmed for recording at 20:00	▶ ● This message will appear 2 minutes before timer programming event due to start.
Timer incorrect !	▶ ● Set Starting and Ending times in Timer Programming correctly (p. 39).
Timer overlap !	▶ ● The timer programme events are overlapped. Cannot record other channel at the same time. Check the Starting and Ending times in Timer Programming (p. 39).
Tuner Locked Please stop recording to operate	▶ ● If you want to unlock, cancel Direct TV Recording (p. 42) or Timer Programming (p. 38).
Unable to download, Check Equipment	▶ ● The tape or disc is active. Stop the equipment and try again.

Specifications

	TH-42PZ70BA, TH-42PZ70B	TH-50PZ70B
Power Source	AC 220-240 V, 50 / 60 Hz	
	Average use	494 W
Power Consumption	Standby condition	0.5 W (Without DVB recording) 20 W (With DVB recording)
	Aspect Ratio	16:9
Display panel	Visible screen size	106 cm (diagonal) 922 mm (W) × 518 mm (H)
	Number of pixels	2,073,600 (1,920 (W) × 1,080 (H)) [5,760 × 1,080 dots]
Sound	Speaker	160 mm × 42 mm × 2 pcs, 8 Ω
	Audio Output	20 W (10 W + 10 W), 10% THD
PC signals	Headphones	M3 (3.5 mm) stereo mini Jack × 1
	PC signals	VGA, SVGA, XGA SXGA (compressed) Horizontal scanning frequency 31 - 69 kHz Vertical scanning frequency 59 - 86 Hz
Receiving Systems / Band name	PAL I	:UHF E21-68
	PAL 525/60	:Playback of NTSC tape from some PAL Video recorders (VCR) or NTSC disc playback from DVD player and recorder.
Aerial - Rear	DVB	:Digital terrestrial services via UHF aerial input.
	M.NTSC	:Playback from M.NTSC Video recorders (VCR).
Operating Conditions	NTSC (AV input only)	:Playback from NTSC Video recorders (VCR).
	Temperature	: 0 °C - 35 °C
Connection Terminals	Humidity	: 20 % - 80 % RH (non-condensing)
	AV1 (Scart terminal)	21 Pin terminal (Audio/Video in, Audio/Video out, RGB in, Q-Link)
AV2 (Scart terminal)	VIDEO	RCA PIN Type × 1
	S-VIDEO	Mini DIN 4-pin
AV3	AUDIO L - R	RCA PIN Type × 2
	VIDEO	Y
COMPONENT	PB, PR	±0.35 V[p-p]
	AUDIO L - R	RCA PIN Type × 2
Others	HDMI1 / 2	TYPE A Connectors
	PC	HIGH-DENSITY D-SUB 15PIN
Output	Card slot	SD CARD slot × 1
	AUDIO L - R	RCA PIN Type × 2
Dimensions (W × H × D)	1,134 mm × 688 mm × 330 mm (With Pedestal)	1,323 mm × 802 mm × 369 mm (With Pedestal)
	1,134 mm × 641 mm × 116 mm (TV only)	1,323 mm × 754 mm × 99.5 mm (TV only)
Mass	42.0 kg Net (With Pedestal)	50.5 kg Net (With Pedestal)
	35.0 kg Net (TV only)	43.0 kg Net (TV only)

Note ● Design and Specifications are subject to change without notice. Weight and Dimensions shown are approximate.
● This equipment complies with the EMC standards listed below.
EN55013, EN61000-3-2, EN61000-3-3, EN55020, EN55022, EN55024.

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